

EPA Region 5 Records Ctr.



257257

Nos 4 & 5  
Prior Owners and/or Operators  
Corporate History

*The*  
**NEWPORT  
COMPANY**

*and its subsidiary  
and controlled companies  
owning and operating*

*at Carrollville, Wisconsin*

*at Passaic, New Jersey*

*at Pensacola, Florida and  
at Bay Minette, Alabama*

*at Milwaukee, Wisconsin*

*at Powellton, Eagle and  
Stanaford, West Virginia  
and Weeksbury, Kentucky*

*Milwaukee, Wisconsin*

*1 9 2 1*

# THE NEWPORT COMPANY

President .....Armin A. Schlesinger  
Vice-President.....Henry J. Schlesinger  
Vice-President.....Myron T. MacLaren  
Vice-President.....Edward G. Wilmer  
Vice-President *in Charge of Operations* .....John W. Shaeffer  
Secretary .....Frederick R. Wahl  
Treasurer .....Myron T. MacLaren

Armin A. Schlesinger  
Henry J. Schlesinger  
Myron T. MacLaren  
Edward G. Wilmer

Herbert H. Springford  
Ivan Gubelman  
Clarence Dillon  
John W. Shaeffer

Frederick R. Wahl

*General Offices  
Milwaukee, Wis.*



*First Wisconsin National  
Bank Building*

*"Coal to Dyestuffs"*

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# The MILWAUKEE COKE & GAS CO.

CONTROLLED BY THE NEWPORT CO.

*Milwaukee, Wisconsin*

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THE Milwaukee Coke & Gas Company's plant for making gas, coke and by-products of the coking process was one of the first to be established in the Middle West; in fact, it was built within the first decade after the use of by-products ovens was introduced into this country.

**The Coal Supply:**—Mines in West Virginia and Kentucky belonging to companies subsidiary to The Milwaukee Coke & Gas Company, supply the plant with coal which is received at its modern concrete dock, 600 feet long, on the Kinnickinnic River. Large 10,000 ton boats are unloaded in eighteen actual working hours by three "Fast Plants," two steam and one electric. In "breaking down" a boat, the grab buckets hoist two and one-half tons of coal each trip, and are regulated to make one hundred trips per hour. Coal from the boats can be unloaded directly upon the dock or conveyed by belt to the storage field and oven coal bins.

From the dock the coal is conveyed by a system of belt conveyors, approximately 5,000 feet long and having a carrying capacity of 600 tons per hour, to a large storage field, covering eight acres and capable of storing 450,000 tons. The pivoted bridge, at the time of its construction the largest reclaiming gantry in the world and then ridiculed by critics as impracticable, swings over the storage field on a semi-circular track. It is used both for storing, by means of a belt and tripper running its entire length, and for reclaiming by means of a 5-ton bucket, having a capacity of 300 tons per hour.

Coal reclaimed from storage or brought direct from the dock is screened to  $2\frac{1}{2}$ " or smaller size, passed over magnetic separators which separate the tramp iron from the coal, and then conveyed into measuring machines which proportion the high and low volatile coals for the production of the best grade of coke.

Following the coal crushing and pulverizing process, the coal mixture is conveyed by a 2,000 foot system of conveyors to the oven storage bins, from which it is drawn and distributed to the ovens by three electric lorries, having a capacity of 2,800 tons each 24 hours.



*"Newport all the Way"*



PLANT OFFICE

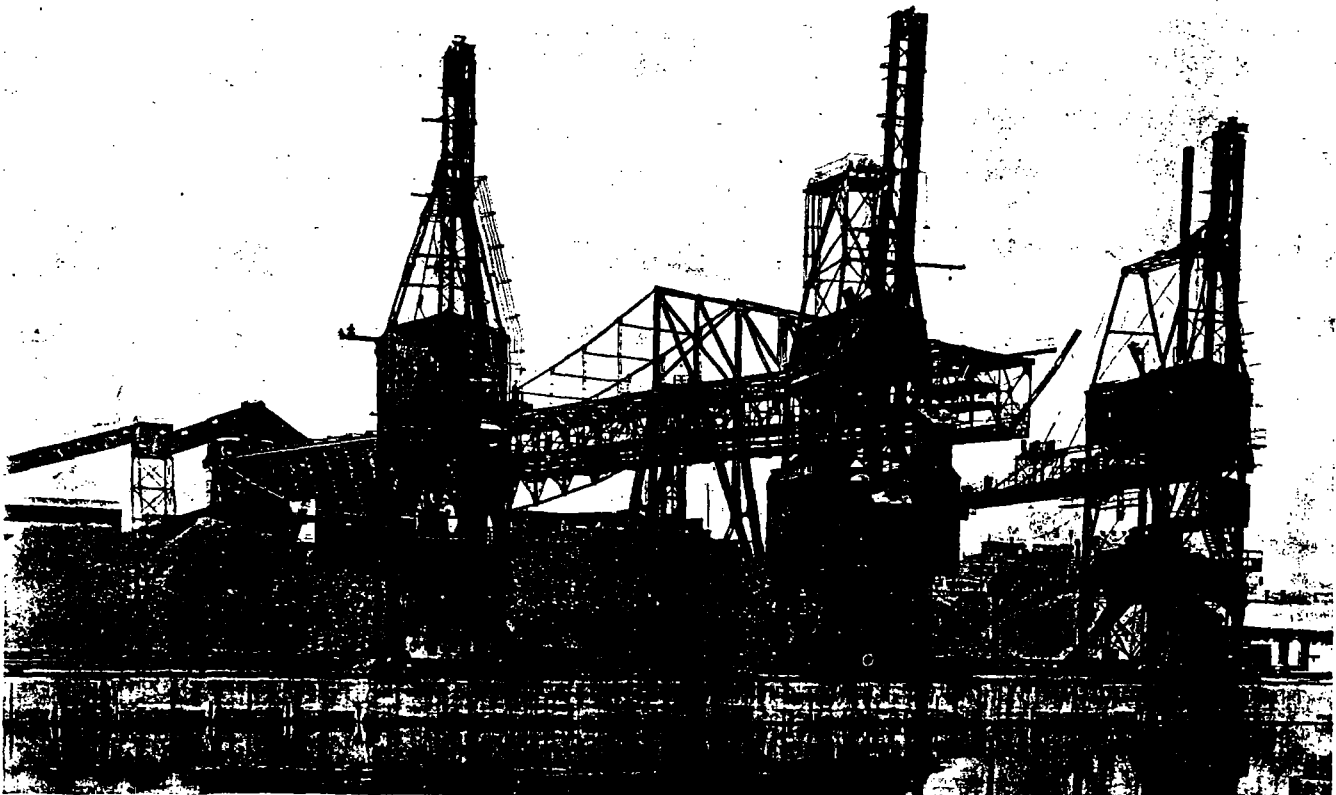


**The Coke Ovens**—The ovens consist of one battery of fifty 12 ton Kopper's Cross Regenerative Combination Coke and Gas Ovens which have been recently completed and put into operation. A second battery, similar to the first is now under construction and will be completed in the near future. The erection of a third battery is contemplated on the completion of the second. These replace the old ovens. One battery of forty ovens will not be replaced during the present reconstruction but will supplement the new ovens.

The Kopper's ovens being built are of the latest type, embodying the most advanced by-product coke oven practice known. They are so arranged that they can be heated by "producer gas." If this method of heating should be adopted, the supply of gas available for Milwaukee city consumption will be materially increased.



PIVOTAL STORING AND RECLAIMING GANTRY BRIDGE AND COAL FIELDS



UNLOADING EQUIPMENT AT THE MILWAUKEE COKE AND GAS COMPANY DOCK

**Coke By-Products**—In addition to the production of coke, the plant recovers the gas from the coal and in turn, by a stripping operation, removes from the gas, coal tar, ammonia, solvent naphtha, benzol, motor fuel and toluol, much of which are utilized in the chemical works of The Newport Company at Carrollville, Wisconsin, as the basic material for the manufacture of dyestuffs, intermediates and pharmaceuticals. Part of the gas passing through the by-product operations is returned to the ovens for heating purposes and the remainder is delivered for distribution to the City of Milwaukee.

**Quenching Process**—After the coal has been coked in air-tight ovens for a period of twelve to eighteen hours, it is discharged by large electrically operated rams or pushers into steel quenching cars, also electrically operated, which carry the glowing coke to the spray for quenching. After leaving the quenching shed, the cars pass to the sorting station, where foundry or run of oven coke (large sized) is loaded into box cars by a car tippie, or is crushed and screened for furnace coke. This car tippie was the first of its kind ever installed in this country. By its use, cars are tipped up on one end and loaded to capacity in fifteen minutes. It has supplanted 200 men formerly employed in wheeling, sorting and loading coke into cars.

**Domestic Coke**—Coke for domestic purposes is crushed and elevated to the top of a large Domestic Coke House, where it is screened into Egg, Range, Chestnut and Pea Coke sizes, by two large rotary screens, with a capacity of 1,000 tons per day. The coke handling department has a capacity of 800,000 tons of coke annually.

**Electrical Power Plant**—The plant generates all electric current consumed by means of two 600 K. W. mixed pressure turbo units and four auxiliary engine driven units of 900 K. W. capacity, giving a total rated capacity of 2,100 K. W. The mixed pressure units were installed for the purpose of economically utilizing all the exhaust steam, not consumed in the manufacturing processes.

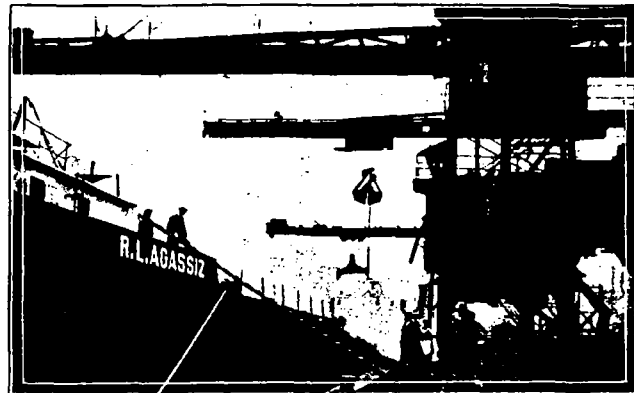
**Steam Power Plant**—Steam is generated in a modern plant equipped with eight boilers, capable of producing eight thousand Boiler Horse Power.

**Water Supply**—The water supply for the plant is brought to two De Laval geared pumping units through two 24-inch suction mains nearly 1,200 feet in length. Each unit consists of an 18 inch and 14 inch centrifugal pump arranged to operate in tandem and has a total capacity of 15,000 gallons per minute, one unit operating and the other reserved as a spare.

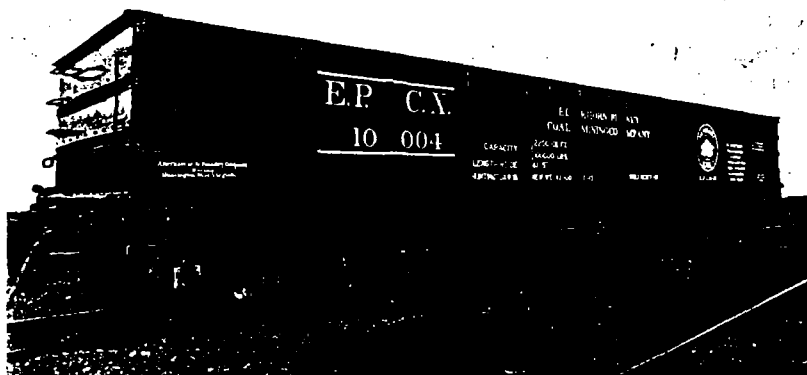
**General**—Other features of interest are: The company garage, housing over 50 automobiles and making complete repairs on company owned automobiles.

A "First-Aid" Hospital, fully equipped and having a nurse in constant attendance, takes care of the employees who require first aid in cases of accidents or sickness. All employees are covered by group insurance carried by the company.

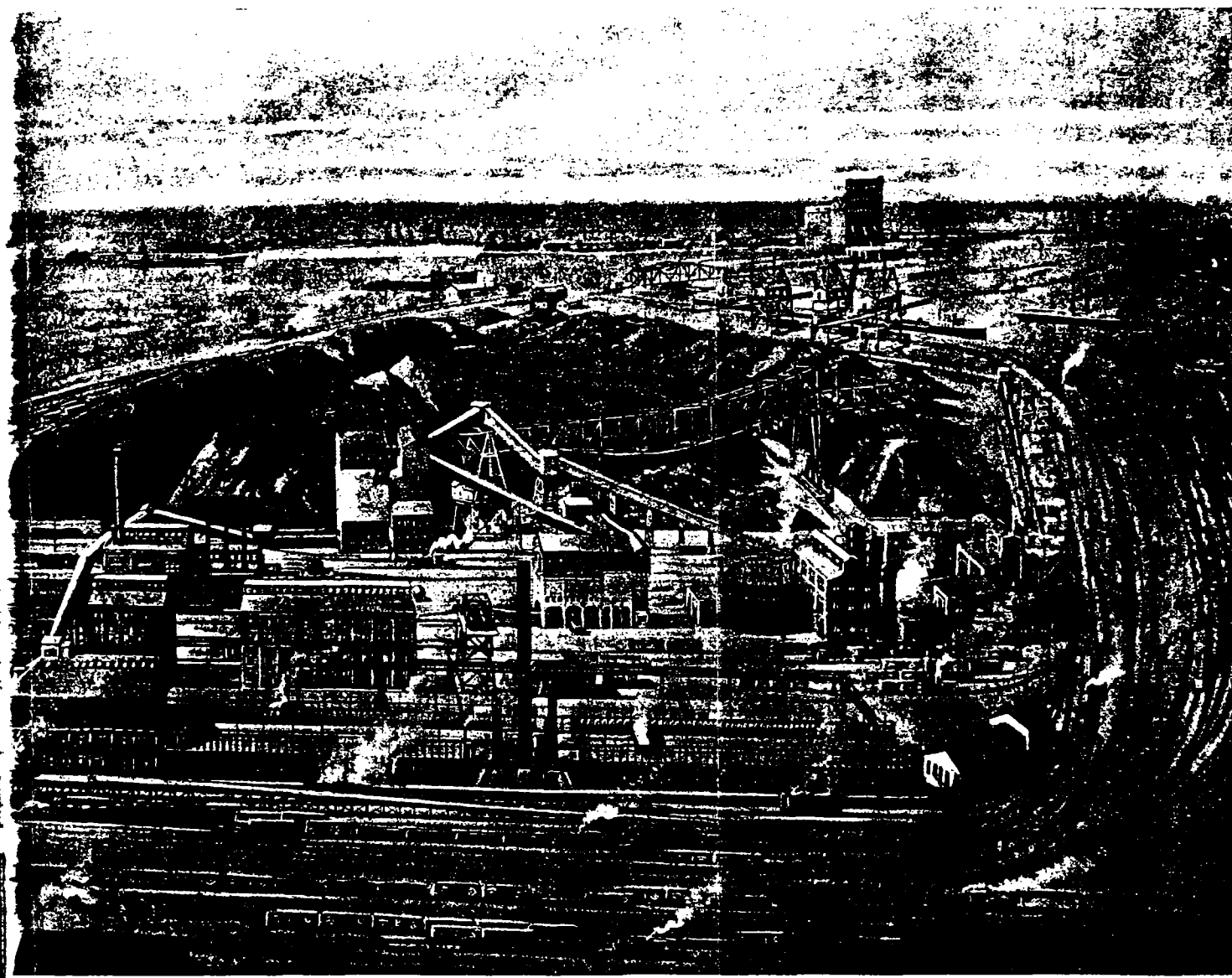
**The Conveyor**—A plant publication, "The Conveyor," is issued monthly to all employees. Because of its general interest, it enjoys an extensive outside circulation.



UNLOADING COAL AT THE MILWAUKEE COKE & GAS CO. DOCKS



ONE OF THE ELKHORN, PINEY COAL CO'S. CARS



**BY-PRODUCT COKE PLANT OF THE MILWAUKEE COKE AND GAS CO., MILWAUKEE, WISCONSIN**

The plant works are situated upon a triangular tract of about 28 acres, lying between the Chicago and North Western and Chicago, Milwaukee & St. Paul Railways and the Kinnickinnic River. The site was originally marsh land, but by reclamation has been converted into one of the most valuable and advantageous industrial locations in Milwaukee. The very best of shipping facilities are afforded by two railroads and private dock accommodations for large coal carrying steamers operating upon the Great Lakes.

The dock frontage is 600 feet. There are 5 miles of railroad track on the property, three locomotives and three locomotive cranes with which to handle equipment and product, and a concrete road extending to various parts of the plant to facilitate the handling of domestic coke and other materials by wagon and motor trucks.

The Milwaukee Coke & Gas Company indirectly supplies the City of Milwaukee with illuminating and fuel gas, furnishes coke to a large domestic trade in Milwaukee and numerous industrial plants for fuel and metallurgical purposes, and delivers a large part of its by-products from the coking operation to the dye, chemical and pharmaceutical plant of The Newport Company at Carrollville, Wisconsin.

The nature of the industry and the service it renders is such as to require a continuous operation of twenty-four hours of every day of the year, the employees working three shifts of eight hours each. Between 600 and 700 men are employed.

The coke ovens above shown are at present being dismantled and replaced with Koppers Cross Regenerating Combination Coke and Gas Ovens and which, when completed, will double the productive gas capacity of the plant.

# The Milwaukee Was Inspan 100 yearerday h a g

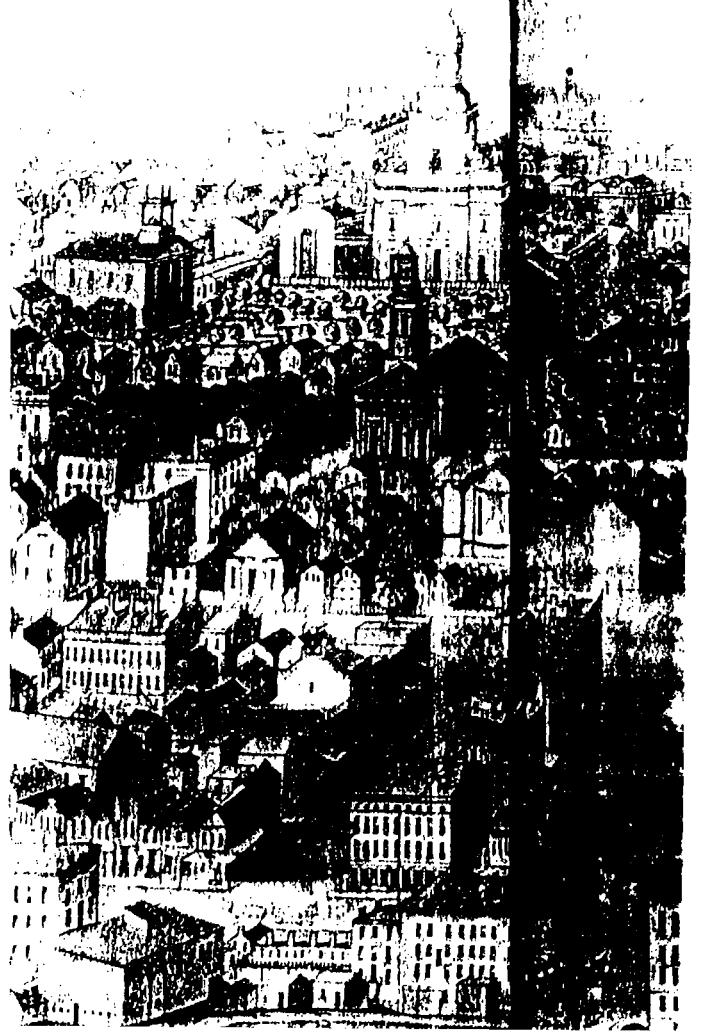
The year is 1851. Milwaukee, as a city, is just five years old. Only recently (it was incorporated as a city on January 31, 1846) did it emerge from the status of a bustling trading village, a far cry from its embryonic beginnings as the Indian settlement Solomon Juneau found in 1818 when he came here to handle the fur trade of Jacques Vieau.

The influx from the East in the early thirties not only brought inhabitants in greater numbers to this "gathering place by the rivers" as the name, Milwaukee, is said to signify, but, their influence was early detected in the physical changes they wrought, for among the newcomers were businessmen and immigrant artisans — men who built with their hands — men whose drive for the furtherance of trade sowed the first seeds of industry which, through the years, were to flourish and prosper until Milwaukee ranked high among the industrial centers of the nation.

The first railroad linking the city with the outside world had just been completed. Heretofore, all travel to and from the city was by stage coach, by water, on horseback or even on foot. Now, at last, Milwaukee was connected by rail with Waukesha, just two and one-half hours away. Known as the Milwaukee and Mississippi Railroad (first chartered as the Milwaukee and Waukesha Road), it formed the roadbed upon which, in years to come, the vast Chicago, Milwaukee, St. Paul and Pacific Railroad was built.

Streets, for the most part, were dusty trails, for this, indeed, was a time before plank roads and cedar blocks. Sidewalks were of wood, and public transportation by mule or horse-drawn cars was still an eventuality. The city's homes, however,

Looking eastward from the bridge at fare. in the early 11 Cathedral (high-spired church), the (far left), the Luc 110 East Wisconsin Building) and the Building). At the stands the first government lighthouse



# Company salutes...

## earerdays,

### n a glance at the present

### and a peek at tomorrow!

idge, alone in the early 1850's. Note St. John's  
(far left), the Ludington Building (now  
and the Building). At the far end of the street  
ighthouse

were snug and attractive, being built, as they were for the most part, of cream colored brick (made from the clay of the region and found nowhere else in the world) which gave to them, as one early visitor said, "a very cheerful appearance as if the sun were always shining there."

With a population of better than 20,000, Milwaukee already had its share of breweries and beer gardens, dry goods and carriage shops, a tannery and even a Board of Trade (forerunner of the Grain and Stock Exchange of later years), as well as a number of banks. Oldest among them, at the time, was the Wisconsin Marine and Fire Insurance Company Bank, established in 1839, and already recognized as the pioneer bank of the entire Northwest. Indeed, for the first ten years of its existence, it furnished all the currency needed for the entire country lying between Detroit and St. Louis. Another, Marshall and Ilsley, later to be acclaimed "the oldest bank in continuous service in the entire Northwest," already had been serving the needs of the settlers for four years.

Even before its incorporation as a city, Milwaukee had taken steps to provide for the education of her children and, as far back as 1845, had 13 public and private schools with an enrollment of 584 students. In 1851 she was progressing even further in the field of education and, in addi-

tion to primary schools and a German high school (well-known later as the German-English Academy, and today as the Milwaukee University School), she pointed with pride to the Milwaukee Female College (forerunner of Milwaukee-Dowder College) which offered grade, preparatory and college courses, as well as special work for day and boarding students.

Neither were the spiritual needs of her people forgotten. For, even before the building of St. Peter's Catholic Church in 1839 (the oldest church in Milwaukee), services were held. On one occasion, at least, the Juneau home was offered to an itinerant preacher, and none other than Juneau, himself, kept the attending Indians at devout attention. Other churches, too, were early erected for people of all faiths.

Milwaukee at this time, 1851, also supported a number of thriving newspapers, among them the *Evening Wisconsin*, a descendent of the *Milwaukee Advertiser*, Milwaukee's first paper and third in the state, whose first issue appeared on the streets on July 14, 1836; and the *Sentinel*, the principal morning paper, founded a year later.

The magic of the telegraph was no longer a mystery, for Milwaukee had long since sent its inaugural telegraph message (January 15, 1848), just four years after telegraphy had been introduced to the world in general. Entertainment of one sort or another could readily be found, and for those of aesthetic taste, music halls and music societies abounded, oddly enough, perhaps, in a spot so far removed from the "culture" of the East.

In short, Milwaukee in 1851, was already taking on the aspects of a thriving metropolis. It is of little wonder then, that to a young engineer from the East, the time seemed ripe to promote a public utility. True, John Lockwood, of Cincinnati, came not to build a gas company, as he eventually did, but to interest the city officials in the construction of a municipal waterworks and sewerage disposal system—a proposition they promptly turned down. After all, they contended, "every property

owner has a well and a pump at the back door and outdoor plumbing in the yard. Why should a lot of money be spent for a sewerage and water system?" Undaunted, however, young Lockwood came back with the offer to build Milwaukee's first gas company, and therein lies the beginning of what has since become the oldest of the utility companies in the city.

Always eager to at least keep pace with Chicago, her neighbor to the south, Milwaukee officials listened eagerly as John Lockwood unfolded his plan. After all, Chicago was already lighting her streets with gas, and Milwaukee was not to be outdone. True, interest in a gas company had been evidenced even as early as October, 1849, when George F. Lee, of Philadelphia, came here with the express intention of constructing a gas company. But, despite Council approval of the plan and the awarding of a contract to him in April of 1850, nothing happened. Lee simply failed to keep his end of the bargain and apparently left the city just as quickly as he had come. The contract, therefore, was declared forfeited on February 1, 1851.

Hence, it was an eager, though cautious, group of aldermen whom Lockwood approached with his proposition on May 31 of the same year. After listening carefully, a committee was appointed on June 5 to study his plans with authority to enter into a contract with him should everything be in order. Evidently, they were convinced of his ability to produce as he promised, for the agreement was executed the following day—and Milwaukee sat back to await the day—promised for some time in 1852—when the city, too, would light its streets by gas. But, was it as simple as all that? What were the terms of the agreement? Where was the money to come from?

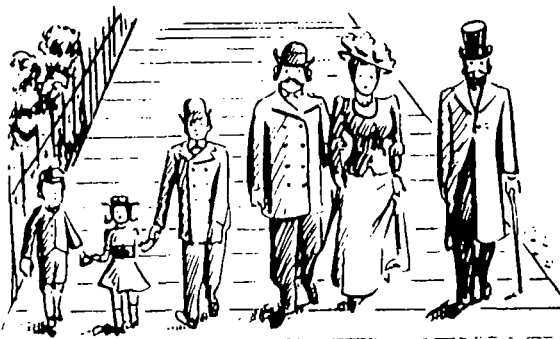
According to the contract, the City of Milwaukee agreed "to convey to Lockwood and his successors or assigns the exclusive right and privilege to make all the necessary excavations, and to lay pipes for the purpose of conducting gas through or under any and all streets, alleys, lanes, sidewalks, highways, commons and rivers in the city for the term of fifteen years from the date of the contract. The city further agrees that all taxes for city purposes that might be levied or assessed upon the personal property belonging to the gas works to be constructed pursuant to the above agreement, shall be remitted and discharged for a period of four years from the date of the agreement." In return, Lockwood agreed to "commence the erection and construction of a gas works in the City

of Milwaukee the same in completion, to good gas for time to tin agreeing to the end of, furnished."

It was Milwaukee for service customers might wood would circumstances. However, others, no same street tomer for main gas Milwaukee R. operation, there might agreement and John I

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of Milwaukee in 1851 and to finish and complete the same in the year 1852, and further, upon completion, to furnish the City of Milwaukee with good gas for all the public lamps that might from time to time be installed, the City of Milwaukee agreeing to pay \$2.50 per thousand cubic feet at the end of each quarter during which gas was furnished."

It was further agreed that should the City of Milwaukee or any of its citizens wish extensions for service which Lockwood or his legal representatives might refuse to make, such prospective customers could build their own extensions and Lockwood would be obliged to sell gas, under such circumstances, at two dollars a thousand cubic feet. However, such pipes were not to be used to supply others, nor were other pipes to be laid in the same street until the company reimbursed the customer for the extension he installed. Moreover, a main gas pipe was to be extended across the Milwaukee River before the gas works went into operation, of sufficient size to supply any demand there might be on the other side of the river. The agreement was signed by the Mayor of Milwaukee, and John Lockwood.

By August of 1851, Lockwood had chosen the site for the new gas works, for records show that on the thirtieth of that month he purchased four 60' x 120' lots on the west side of Jefferson Street, between Menomonee and Juneau (now Corcoran Avenue). Three months later, excavation was begun and the first steps of construction of the Third Ward Gas Works were under way.

On January 3, of the following year, John Lockwood, with a group of prominent businessmen of the day, joined together in an association to be known as the Milwaukee Gas Light Company. On that day, too, Lockwood assigned his interest in the contract with the city to the new Gas Light Company, and two days later entered into an agreement with the company for the construction of a complete gas works. He promised to lay six miles of main, put in one hundred meters, service cocks and service pipes, provide 350 tons of coal (an eight months' supply), and to build the works itself, which was to consist of a retort house, purifying house, meter room, office, fitting shops, lime house, coal sheds, station meters, washers, condensers, hydraulic main, dip pipes, stand pipes, and a gasometer. Moreover, only first-class materials were to be used, and workmanship was to be of top quality. The total cost was set at \$149,000 with "payment to come, so far as possible, from the



*sale of stock with the balance to be paid, half in seven per cent convertible bonds and the remainder in stock."*

One week later the Articles of Association were filed with the Secretary of the State of Wisconsin, and a 30-year limited corporate existence was granted. Authorized capital stock was set at \$150,000, with William P. Lynde, John Lockwood, James H. Rogers, David P. Hull and James Kneeland as incorporators and trustees. James Kneeland was named president. However, because of dissatisfaction over the clause limiting its corporate existence as provided under the general statutes, the trustees applied for a second charter giving the right of perpetual succession under legislative act. This was granted and on March 27, 1852, the Milwaukee Gas Light Company received the charter not only perpetuating its existence, but also giving it an exclusive franchise to serve the City of Milwaukee.

According to the terms of this charter, the powers and privileges granted to the Milwaukee Gas Light Company were to include "*full and exclusive authority to manufacture, make and sell gas to be made from any and all substances, or combination thereof, from which inflammable gas is obtained, for the purpose of lighting the City of Milwaukee or the streets thereof, or any buildings, manufactories, public places or houses therein contained and to erect all necessary works and apparatus and to lay pipes for the purpose of conducting the gas in any of the streets, avenues, commons, lanes or alleys in said City, provided that no permanent injury shall be done to any street, highway, lane or alley in said City, agreeably to the terms and conditions of a contract now existing between the City of Milwaukee and John Lockwood entered into on the sixth day of June, A.D. 1851.*"

Authorized capital stock remained at \$150,000 — 3000 shares at fifty dollars par. A change, however, was made in the directors and officers of the new corporation. At the first meeting of the Board of Directors, James H. Rogers was elected president to replace James Kneeland, who became

treasurer. David Hull continued as secretary. The stockholders, in similar session, named Alexander Mitchell to replace William Lynde on the Board of Directors.

From then on, work moved along rapidly, considering the inefficient means at hand. Brick and stone were delivered in large quantities; orders went forth to Philadelphia for 100 meters, and to Pittsburgh for pipe. Late in May, the Schooner *Handy* sailed into port with 111 tons of gas pipe, retorts and castings, and by July, men were digging ditches and laying 3-inch mains. The big, three and one-half ton iron main, 222 feet long, destined to carry gas to the west side of the river at Spring Street (West Wisconsin Avenue) was ready in August for laying by a man from Albany especially hired for the job because of his experience and equipment.

Like the pieces of a jig-saw puzzle, everything was beginning to fit into place. Indeed, by Fall, through the efforts of more than 100 men, the exterior of the works buildings had been completed—a retort house, 52 by 62 feet and 28 feet high, of Cream City brick, had been set up, along with several smaller structures and a gasometer, or holder, approximately 72 x 22 feet, with a sheet iron top and a capacity of 75,000 cubic feet. Even the lamp posts had been set up on the city streets.

All Milwaukee was growing eager. However, within the company itself, problems, particularly financial ones, were mounting. Subscribers for stock were not easily found, for money was rather limited. Many of the settlers had used their small savings to pay for the difficult and costly journey that brought them to the West, and to set up their homes and workshops. Others, like Kneeland, and Rogers and Lockwood had already invested heavily in the new organization. Hence, it became imperative to agree to 10 per cent interest on stock payments until dividends were paid, and to issue bonds (\$80,000 worth at 7%, convertible into common stock) in order to acquire additional working capital. Indeed, not only was it necessary to give Lockwood \$20,000 in bonds and 300 shares of stock to apply on the gas works contract, but to pay, in stock and bonds, for the corporate seal, the stationery, the meters and the coal (the first shipment of which had come by schooner from M. B. Lowrie, of Erie, Pennsylvania). The situation was serious, but stockholders, suppliers—everyone had risked too much not to see it through.

The public, however, was blissfully unaware of all of this. To them, this was, indeed a big year. The city had a new mayor, Hans Crocker (the

mayoralty term in those days was for a year only)

the population had increased to about 27,000, and the city boundaries had pushed out to the north as far as Brady Street on the east side of the river and Walnut on the west side; Greenfield Avenue on the south; the lake on the east, and on the west, to a line just beyond what is now Twelfth Street. The first railroad locomotive ever to be built west of Cleveland had been completed here for the Milwaukee and Mississippi Railway Company. Milwaukee and Chicago were, this very year, connected by rail, and the Milwaukee and Mississippi Road had been extended to Eagle and was steadily being pushed on toward Milton, Wisconsin. The city, beyond doubt, was becoming one of the most important centers east of the great Mississippi.

The days grew shorter and colder. It was soon the middle of November and the date set to light the city streets for the first time was not far away. Notice had been given that the lights would be lit on Wednesday, November 17, with a preliminary test to be made on the previous Friday. Thus it was that the first jet of burning gas ever to be seen in the city appeared in the retort house on November 12, giving, as spectators said, "a clear white flame and no perceptible odor." However, plans did not materialize as John Lockwood and his associates hoped they would, for, just the day before the initial lighting ceremony, an inquisitive visitor to the works turned on a few stop cocks "just to see what would happen"—with the result that the ensuing explosion caused by the ignition of the accumulated gas by a flickering candle, blew out one entire side of the newly completed building. Although the damage was not great and no one was injured, the street lighting ceremony had to be postponed for a week.

At last, however, the big night arrived. It was November 23, 1852, and, for the first time in the city's history, the streets were brilliantly lighted. Where once only the moon had cast her glow, now gas brightened Jefferson, Milwaukee, Main, East Water, Huron, Wisconsin, Market Square, Spring,

Continued on page 10



**Milwaukee**  
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SALUTE, . . . Continued from page 6

Second, Third and Chestnut Streets — the city's first lamp-lighted area. East Water (now North Water), one of the principal business streets then, from Erie to the City Hall square, became the "great white way of the time." Everyone turned out to parade up and down the streets. Excited and happy Milwaukee welcomed this, the biggest thing that had ever happened to them — a step that put them on an equal footing in one respect, at least, with Baltimore, first city in the United States to be illuminated by gas; with Boston, New York, Brooklyn, New Orleans and a good many others, but especially with Chicago, their "rival" on the south. True, the initial lighting was not without fault. Some of the lamps burned with a blue flame instead of a luminous one — too much air in the pipes, it was said — but, for the most part, the burners gave a "clean, beautiful" light — and everyone was delighted.

Then, as today, so great a step in civic progress called for a celebration. A big one, it was, too — a formal affair in Young's Hall which was brightly illuminated by two huge gas chandeliers as marvelous as the occasion they lighted. All the prominent people of the day were there, eighty of them, headed by Mayor Crocker, one of the speakers of the evening. Byron Kilbourn, Rufus King, editor (later Milwaukee's first superintendent of schools), and Garret Vliet, surveyor and civic leader for whom present-day Vliet Street was named, were likewise there, as was the former mayor, D. A. J. Upham, who presided.

Although the city was virtually the company's sole customer at the time, it didn't take long before a number of business firms decided that they, too, could use a bit of this "magic light." So, when the company, about a month later, invited the public to subscribe for either commercial or domestic lighting service, many of them made immediate application. A glance at the company's application book for December of 1852 shows such names as:

Kneeland & Hull	Bankers	4 burners
Rufus King & Co.	Sentinel office	2 burners
A. Kirby	Jeweler	6 burners
Byron Kilbourn	Dwelling	2 burners
T. Wettstein	Hotel	9 burners
Solomon Adler	Clothing	7 burners
H. J. Goff	Confectioner	5 burners

No.	Date	Name of Applicant
217	Dec 12	Melania H. White
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24		E. Thakelhoff
50		A. Krong
		P. Helin
113		T. Gustenhof
15		David Knab
17		Wm. C. Jones
112		J. P. Buel
Nov 15		Kelly & Sons
1		S. B. Davis
		S. B. Davis
		C. W. Kelley
June 7		Kelly & Son
June 15		Graham & Co.
July 3		East Wichita
July 16		A. H. H. H. H.

It is interesting to note that among these early applicants were the H. Niedecken Company, John Pritzlaff Hardware Company, Guido Pfister and Company (Pfister & Vogel Tanning Co.) and the American Express Company (now the Railway Express Company), all of whom are still operating today.

Query may be made by the curious as to the reason why only Byron Kilbourn, of the city's founding three — Solomon Juneau, Byron Kilbourn and George Walker — subscribed for the new service. The answer is very simple. Only he, of the triumvirate, lived in the company's service area, at Second and Spring Streets, in the heart of old Kilbourntown, west of the Milwaukee River. As for Juneau, he was no longer a resident, having left, just the year before, to go north — to establish the city of Theresa, some 50 miles away. Incidentally, his home there still stands, high on a

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Again, John Lockwood was called upon to build the gas plant. Within seven months, the

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## Third Ward Works

1853

The Third Ward Gas Works dominated the swamplands of the lower East Side.



new company was operating with a works, 100 x 150 feet, on the southwest corner of what is now South Second and West Bruce streets. Three miles of main were laid and rates were set at the same level as those of the Milwaukee Gas Light Company.

Meanwhile, things did not remain stagnant at the east side works. The legislature, two years before, had authorized an increase in the company's capital stock and subscriptions for it, along with a series of bond issues, provided the necessary funds for a much needed expansion program. Additional lots were purchased and the first in a series of major changes was begun. The retort house was almost doubled in size, benches were installed in the six extra furnaces originally provided for but not used at the time the plant was built, and six new benches of three retorts each were set up. The old purifiers were replaced by four new ones, and the works capacity was increased to 80,000 cubic feet, capable of expansion to 120,000 cubic feet a day with the then existing facilities.

Thus it was that in 1857 when a proposal was made to form another company, the Wisconsin Gas Light Company, to provide service for the

entire area west of the Milwaukee River, the Milwaukee Gas Light Company was able to block it. After all, the directors maintained, a sizeable portion of that territory was already being served by the company, and new extensions were even then being planned for the following year. The company had been given a franchise to serve both the east and west sides of the city, and it intended to do it. The legislature apparently realized the sincerity of the company's promise to extend its service, for it withheld authorization of another organization. By March 31, 1857, the company had 889 customers. Its fiscal report furthermore showed that the gas send-out for the past twelve months had been 16,290,000 cubic feet, of which 11,630,000 cubic feet had been for commercial and domestic purposes; 1,700,000 for city use. Two years later, total sales had grown to over 18,000,000 cubic feet, the company having fifty-six retorts in service, seventeen miles of main, and 1,334 customers.

Even as the Milwaukee Gas Light Company was growing, so, too, was the city. Despite the depression that had settled over the country in '57, and the mutterings of war that already were filling the air, Milwaukee was progressing. She,

some months before, had made her first shipment of wheat direct to Europe — 16,000 bushels of it aboard the sailing vessel, the *Dean Richmond*, bound for Liverpool. Not only was this the first of such shipments direct from Milwaukee to Europe, it was the first from the Great Lakes region, and marked the beginning of the city's rise as one of the great wheat centers of the nation.

She had long since replaced her original floating bridge which spanned the river at Wisconsin and Spring Streets (Wisconsin Avenue) with what was then something rather revolutionary — a swing type affair. She had worked on her streets to improve them, and while some were paved with cobblestone, the majority of them were paved with cedar blocks. The first horse-drawn streetcars were regularly rumbling down East Water Street from the bridge to Juneau Avenue. The fire department had been enlarged and the city now boasted a police department as well, with a chief, William Beck, and 25 men. The new, three-story marble government building housing the post office, the United States Court and other Federal offices had but recently been opened, and the Milwaukee Chamber of Commerce (organized October 22, 1858) was already playing an active role in the daily business life of the community, now grown to some 45,000 citizens.

A lake connection with the Detroit, Grand Haven and Milwaukee transportation line had been established, with the initial run of *The Detroit* and *The Milwaukee*, the *Black Boats* as they were popularly known, being made in August of '59. It is said that the boat company dock was near that of the Gas Company (in later years) on the Milwaukee River. Even more interesting is the part these boats played in the mail delivery of the day, for on them was established the first marine post office in the U. S. interior. For four years, 1860 to 1864, this pair of lake steamships carried all the mail between the East and Wisconsin, Minnesota and northern Iowa.

Perhaps the two highlights of the period might well be said to be Abraham Lincoln's visit to Milwaukee in the fall of 1859 (his second to the city and third to the state), and the sinking of the *Lady Elgin* by the schooner *Augusta*, on September 8, 1860, with a loss of 300 lives, mostly Milwaukeeans on their way back from a day in Chi-

cago. Considered one of the greatest lake disasters of all time, it has served as the subject of many a poem and song.

Of Lincoln's visit it might be pointed out, that he came here by invitation, for he was to address the fair of the State Agricultural Society of Wisconsin at the fair grounds west of 10th Street, between the North Wauwatosa Plank Road and Spring Street. A plaque today marks the spot where he stood to deliver his message. It is on the west side of 13th Street, about halfway between Wells and Kilbourn. As history records it, no provision had been made for a speaker's stand, so Lincoln unhesitatingly climbed upon a wagon and, for an hour or so, spoke not of politics but of agriculture and things of interest to the gathered farmers. For this he was given a check for \$100.00, an extravagant sum in the opinion of many who were heard to grumble: "one hundred dollars for a single hour!"

Perhaps, though, his greatest message of the day was that which he delivered extemporaneously later at the Newhall House (one of the city's newest and finest hotels), for it was there, memoirs of early Milwaukeeans show, that he spoke on the slavery issue, expressing many of the views he held

*Continued on page 18*

1852	Milwaukee Fire Dept. Expenses (through November 23) . . . . .	\$ 852.00
	Estimate . . . . .	2,500.00
	Expenses (1951 operating) . . . . .	\$3,960,588.92
	Budget (1952) . . . . .	4,383,601.00

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1853	Adalina Patti, celebrated concert star, appeared here at Young's Hall
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1853	Farmers and Millers Bank organized, the forerunner of the First Wisconsin National Bank
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1854	Bank of Milwaukee founded. Reorganization and merger with the city's first bank later created today's Marine National Exchange Bank
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1861	The Association of Commerce was formed
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COURTESY OF THE MILWAUKEE HISTORICAL SOCIETY

## The Milwaukee

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in his debates with Stephen Douglas. Indeed, it is said that his talk was approximately that of the Cooper Institute speech he delivered a few months later. At any rate, records show he did warn, even then, of the danger of a nation divided on a basic issue, for he said: "I do not believe that the Union can permanently endure half slave and half free." Little did Milwaukee realize to what heights this man who stood before them then would some day rise. For that matter, neither did Lincoln, for he was as yet but a little-known lawyer.

Along with the changes the years brought to Milwaukee, changes came likewise to the now well-established gas company. Additions and revisions were made from time to time at the works, but perhaps the strongest indication of its progressiveness as a corporation was its ability to acquire, in January, 1864, its sole competitor, the Fifth Ward Gas Company — lock, stock and barrel. In serious financial difficulty since 1862, the Fifth Ward Company lost control of its stock, more and more of which found its way into the hands of Eliphalet Cramer, then president of the Milwaukee Gas Light Company. The situation became such that it required nothing more than legal formality to effect the acquisition.

Although small as a corporation, the Fifth Ward Company did have a rather sizable plant investment, and had, in 1861, sold more than 1,000,000 cubic feet of gas to private consumers plus more than 700,000 cubic feet to the city. For almost six months after it was absorbed by the Milwaukee Gas Light Company, it was operated as a unit. However, in June of 1864, a pipe was laid across the Milwaukee River, thereby connecting the distribution system of the old Fifth Ward Gas Company with the Jefferson Street plant of the Milwaukee Gas Light Company. A year later, both the property and the buildings were sold.

The Civil War, like all wars, added further burdens to the Gas Company. The cost of coal increased from \$4.30 to \$9.26 a ton. A government tax of 20c per thousand cubic feet of gas consumed brought forth angry protests from numerous customers. But, with the coming of peace and the reconstruction period, the company again began to prosper. Indicative of this is the increase in salary granted to the president. At the time the company was organized, the salary was set at

\$100.00 a year. In 1859, it was increased to \$500.00; in 1865 to \$1,000.00 and in 1867, to the phenomenal sum of \$2,000.00 a year. Further evidence of company prosperity can be seen in the fact that, along with an expansion program which called for crossing the Menomonee River, old mains were taken up and replaced with new ones twice their size.

Not many years after this, the company began to pioneer in another direction. Gas for lighting was well established; it was time to introduce gas for other purposes, and cooking seemed to be the most logical. Although there are no records to indicate who first used a gas range in the city, it is known that a number of ranges made in England were in early use here. The Milwaukee Gas Light Company itself took initial steps to promote cooking by gas in 1878, purchasing at that time, fourteen stoves and four ranges from the W. W. Goodman Stove and Range Company, Philadelphia. Unlike today, the company served merely as a middleman in the project, leaving the entire sales responsibility resting with the city's merchants—a format that was followed until 1890 when the company acquired a full stock of ranges and, with the promotion slogan, "A gas range is a coal range with a college education," actively engaged in the sale of ranges.

The next development of importance came with the company's acquisition of additional property along the river — the south side of Erie, from Jefferson, west. For the first time dock space became available, and coal shipments could be brought in direct to the plant. This was the era of hand unloading. Old-timers tell how buckets were lowered into the hold of the schooner, to be filled by hand and then pulled out by a team of horses. Next they were emptied into small carts, weighed and hauled to the coal sheds on Milwaukee Street. There were no time-saving, labor-saving devices then! But, with the years, this was all to change. In fact, in the spring of 1881, the company undertook to enlarge and improve its existing plant facilities, and, more specifically, to speed up its unloading operations. Records show that not only was a two-story coal shed, with a 5000 ton capacity, erected, but that it was equipped with the then latest hoisting apparatus guaranteed to "unload the largest vessel in two days." The building was so

Third Ward

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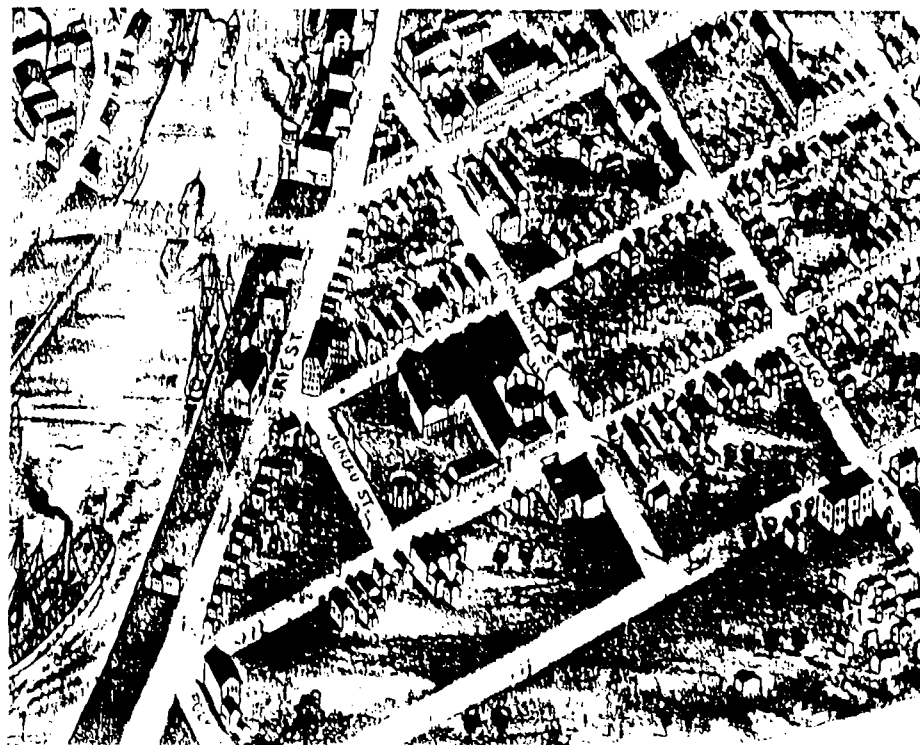
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## Third Ward Works

1871



designed that narrow runways extended from the second floor to the edge of the dock, along which coal could be wheeled from the ship to the shed, and dropped to the storage bins through large hatchways. Modernity was, indeed, taking hold of at least part of the old works.

For the next few years this revamping program continued to be carried on to such an extent that by the end of 1885, with the erection of a new retort house on Erie Street and a purifying house on Corcoran Avenue, along with additions to the dock and coal shed, almost an entirely new plant had come into being. At any rate, capacity was doubled, and the facilities then provided apparently were more than adequate to handle any load increases, for it continued to be operated as a coal gas plant until it was shut down on March 12, 1905.

All this activity on the lower east side could only be indicative of one thing: service demands were increasing for Milwaukee was growing. By 1880 the city had better than 21 miles of paved streets, another car line operating on West Water Street, a telephone exchange and a municipal

waterworks, the latter set up on property chosen by John Lockwood some twenty-odd years before when he had vainly tried to promote the project in the City Council. Her population was increasing rapidly. More than that, her industrial activities were gaining prominence for statistics show, between 1870 and '80 while the population increased 60%, the number engaged in manufacturing pursuits increased 150%. Moreover, during this same period, there were only thirteen cities west of Philadelphia with more than 100,000 inhabitants, and of these cities, only Pittsburgh and Cincinnati had a larger percentage of population actively engaged in manufacturing pursuits than had Milwaukee. The latter, however, supported much more diversified manufacturing. Indeed, by 1890 records further show that in just one phase of manufacturing operations, the tanning of plain leather, Milwaukee already had become a world leader, producing more of it than any other city in the world—a record she held for many, many years. It might also be pointed out that, at this time, too, another of her present great industrial organizations came into being—the Nordberg Manufacturing Company, an outgrowth of the

Bruno V. Nordberg Company set up four years before by Mr. Nordberg, who, after ten years at the E. P. Allis Company (later Allis-Chalmers), felt experienced enough to go into business for himself.

Despite expanding industrial activities, however, the city managed to maintain a small town community atmosphere, where *Gemütlichkeit* and friendliness prevailed. Within the next few years a number of new buildings began to dot the city skyline. Among the largest was the Milwaukee Exposition Building (1881) on the site of the present Auditorium, and even then occupying the entire square from 5th to 6th Streets, between State and Kilbourn, until gutted by fire in 1905. It served much the same purpose as does the Auditorium, but in addition, it housed a permanent art gallery, an industrial exhibit and a splendid North Woods display.

Another of the "landmarks" that came into being at this time was the Pfister Hotel, destined to become not only the scene of many social and civic affairs down through the years, but also to become the *hotel of presidents*, for, up to the present time, every president of the United States who has ever visited Milwaukee since the hotel was built, has stayed at the Pfister. The pride of Charlie Pfister, the hotel was not only magnificent inside and out, but it boasted of a new kind of pavement over which smartly drawn carriages pulled up to its door. It was asphalt — one block long, from Wisconsin to Mason, on Jefferson Street, and said to have been laid as a private project by Pfister himself to "dress up" the main entrance of his hotel. True, or not, it *did* serve as a *test block* and was definitely the city's first permanent pavement.

Then, as now, Milwaukee had her share of civic-minded citizens, interested in her welfare as a city, and anxious for her cultural development. With a public library, a museum of natural history, an opera house (Nunnemacher's Grand Opera House, superseded in '93 by the Pabst Theater), the Davidson, a number of musical organizations and an active Art Society, the need seemed apparent for a place to house a collection of paintings — a spot to which Milwaukeeans could come to study the works of the masters. At any rate, Frederick Layton felt the need to be great enough, for out of his own funds he built the Layton Art

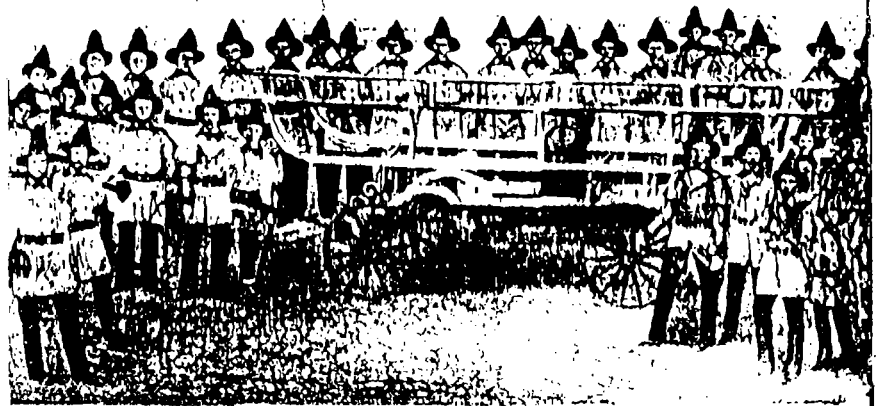
Gallery and, with a number of paintings and a sizable endowment, presented it to the city — a monument that still stands to his memory and to Milwaukee's early prominence as a patron of art, music and the theater.

However, while all of this was going on, activity at the Gas Company's Third Ward Works had not become stagnant. Up until this time (more specifically, up until 1890) all of the gas sent out was coal gas, manufactured in the conventional retorts. However, a new water-gas process had been developed, known as the Wilkenson Process. Apparently, it differed from the Lowe Process in use later, in that there was no super heater to mix the two gases while hot, the mixing evidently being done in the relief holder. At any rate, the company was determined to employ the new process here and immediately set about to erect the necessary plant facilities on the north half of the Third Ward Works. But, before the plant could be put into full operation, legal difficulties arose and, as a result, the process was rejected entirely. The company, nevertheless, continued its expansion program over the years, adopted the Lowe water gas process, and endeavored to better its service as demands for gas constantly increased.

It was during this period that the great Third Ward Fire occurred, Friday night, October 28, 1892, which, except for the quick thinking of the men on duty at the gas works, might have resulted in great loss of life as well as irreparable damage to the plant itself. As it was, although sixteen square city blocks were destroyed from East Water Street (now North Water) to the Northwestern tracks, between Erie and Detroit Streets, at a loss of \$4,710,255 (a sum, many times greater in today's real estate market values), the gas works for the most part escaped.

True, the company stables burned (none of the horses were harmed, however), and the fire spread to the coal supply, boiler house and engine room, leveled the carpenter shop, and damaged pumps, scrubber room condensers and belting. But, for all of that, the fire did not reach the coal gas plant, nor did the works blow up as panic-stricken residents of the lower east side believed it would, thanks to Tom Powers, foreman of the water gas plant, and Bill Tanner, foreman of the coal gas

Members of Milwaukee Engine Co. No. 1 beside an 1855 engine.



plant. It was Powers who ordered the plant shut down and the holders lowered by increasing the pressure in the mains when it became evident that the fire was spreading to the lake and would soon engulf the works, while Tanner stopped the firing of the retorts and opened the charging doors to permit the gas to burn up. To them and to the men on duty that night — Pat Regan, Charles Engles, Nils Nilson and Tom Johnson, full credit must be given for not only fighting the fire as it spread through the plant but in preventing a major disaster. Although service was temporarily disrupted because of damage to the water gas plant and the storage of personal property in the retort house, put there for safekeeping during the fire, it wasn't for long. Late the next afternoon, gas began to enter the mains and by Monday of the next week, full operation was resumed.

*Continued on page 30*

## Third Ward Fire

440 buildings — 185 freight cars  
on Northwestern tracks  
destroyed

16 square blocks burned  
1,893 families made homeless

As a 50 m.p.h. gale whipped flames into a raging inferno, 16 Milwaukee engine companies and 240 city firemen, aided by men and equipment from Chicago, Oshkosh, Kenosha and Racine, fought the conflagration. Police and 200 national guardsmen also were called into action as thousands fled, panic-stricken over a possible gas works explosion. The red-tinged sky, it is said, was visible 30 miles away.

Engines like this helped to fight the Third Ward fire.

PHOTO COURTESY OF THE MILWAUKEE JOURNAL



SALUTE... Continued from page 23

It was during this era, too, that Carl von Welsbach developed a new type of gas mantle to which he gave his name. Capable of 50 to 75 candle power, the mantle made it possible for gas to give a whiter, brighter light than ever before. Because of this, it added years to the life of the industry at a time when the potentiality of electricity as a source of light had already been demonstrated — at the World's Fair in Chicago, in 1893.

Although there were no major changes made at the works from 1896 to 1900, the next ten years thereafter were filled with many construction activities, the old Third Ward plant undergoing complete revampment to make ready for a change-over to a water gas plant and later a purifying



station for Solvay gas. The latter was supplied by the Milwaukee Coke and Gas Company (forerunner of the Milwaukee Solvay Coke Company) under contract to the Milwaukee Gas Light Company. The plant itself had been built in about 1905

by the Schlesinger interests, and stood at the foot of Greenfield Avenue. After a number of ownership changes through the years, the company was finally acquired by the Milwaukee Gas Light Company on January 3, 1947.

The entrance of the American Light and Traction Company into the local operational picture in 1900 was the beginning of a great expansion era. Much construction was started and many improvements in operating methods were made. Although the Milwaukee interests had been sold as far back as 1896 to Emerson McMillin, founder of the American Light and Traction Company, the first utility holding company in America, the latter did not actually take control of the Milwaukee organization until four years later. Immediately thereafter, plans were made for further plant development. As a result, at the West Side Works, North 25th Street and West St. Paul Avenue, the property of which had been acquired by the company back in 1886 and only partially developed, a new coal gas plant and retorts were set up. It marked the beginning of a transition period from the manufacture of coal gas — to the coke era — to the liquefied petroleum gas period and eventually, the introduction of natural gas to the Milwaukee area.

Although busy with its building projects and expanding service, the company did not lose sight of the necessity for development of other phases of the industry, namely, heating and industrial gas usage. As early as 1890, the company offered heating service to those who might want it, but, for the most part, its cleanliness and economy as a heating measure remained untried, or almost so, until much later. However, this situation did not hold in the realm of commercial cooking. Intro-

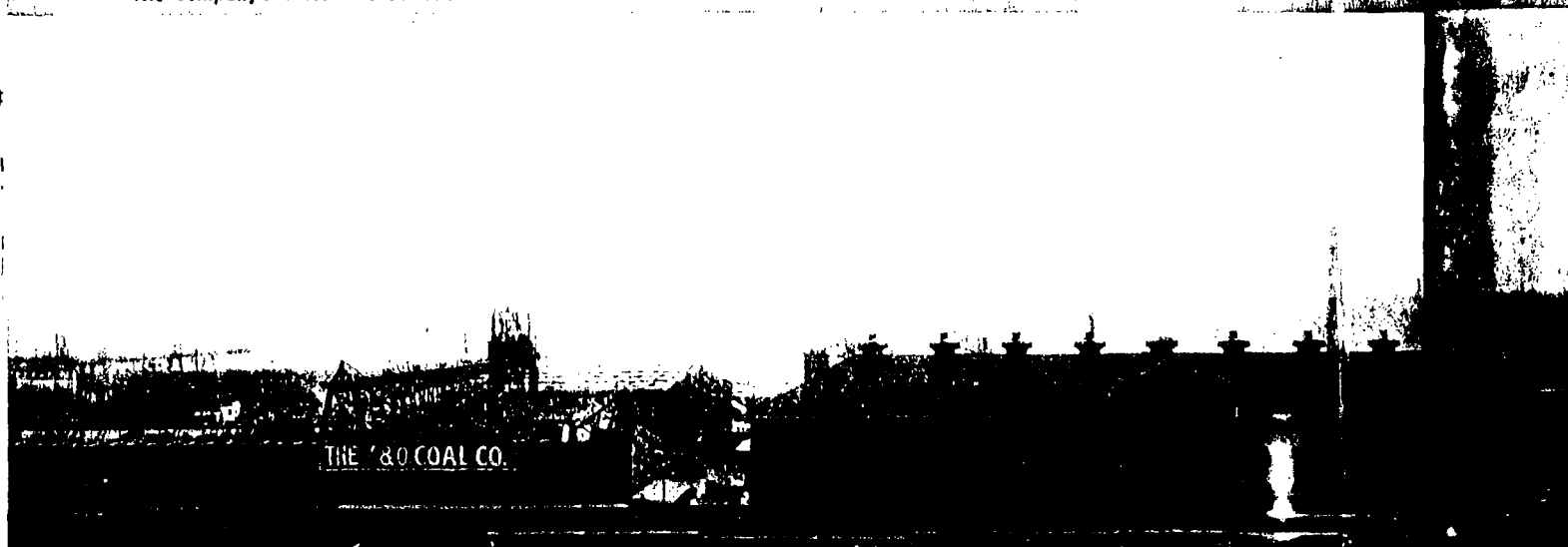
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The company's West Side Station



duced to the hotel and restaurant chefs between 1900 and 1910 as the ideal means for quantity food preparation, gas, at first, it is true, met with some resistance, but soon took hold as more and more "courageous" chefs tried it and enthusiastically proclaimed its advantages.

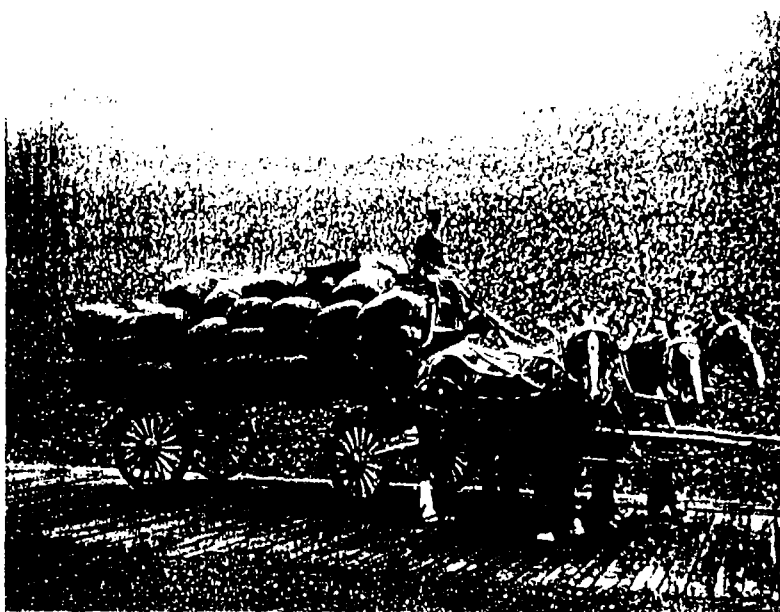
The industrial adaptation of gas was not so long in taking hold, for manufacturers readily realized its superiority and used it freely in the heating of small appliances — soldering irons and the like, and, as newer applications were developed, they were accepted too. As early as 1911, for example, the International Harvester Company here was regularly using a million cubic feet of gas per month. Today, it uses approximately 25,352,000 cubic feet in a like period.

Through the years industrial use of gas grew tremendously, and it quickly spurted to even greater heights with the introduction of natural gas a few decades later. But, even with this heavy concentration on industrial application of gas, engineers were striving to perfect new domestic uses of it as well — first as a means of heating water, then for refrigeration.

It is interesting to note, too, that despite the fact that larger and perhaps even more important harbors serve the country, their lighthouses guarding the safety of mighty ocean-going vessels, even in the early years, it was the North Point lighthouse in Lake Park, right here in Milwaukee, that became the first gas-lighted lighthouse in America. It was in 1913 that the United States Lighthouse Service opened negotiations with the Milwaukee Gas Light Company for gas service to the North Point lighthouse. After a thorough investigation of its ability to provide an unfailing source of

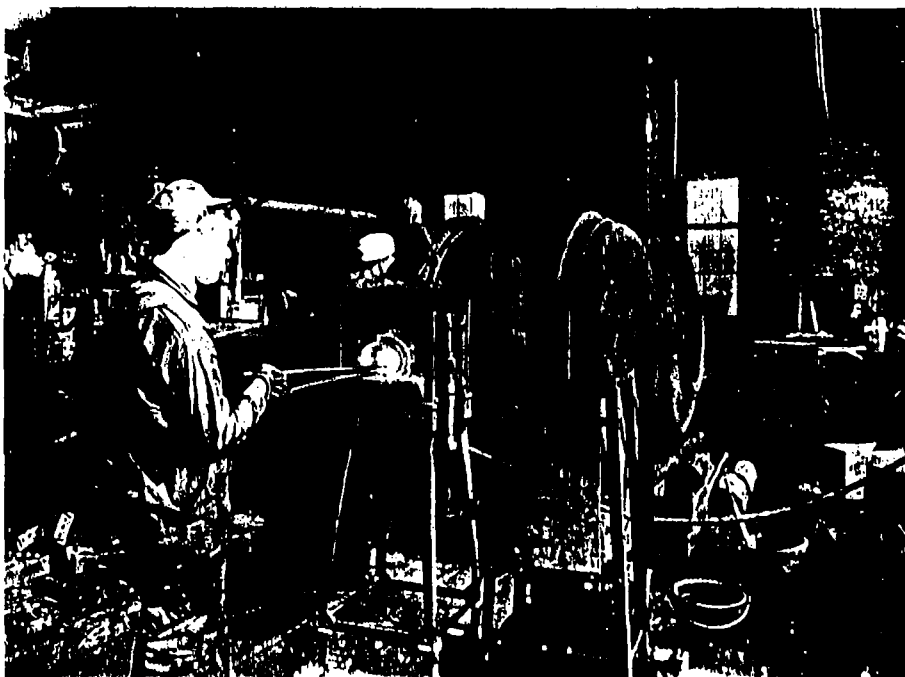


Coal trains, such as this, supplanted the old hand methods of moving coal from ship to storage sheds.



Coke, once a useless by-product of coal gas manufacturing operations, was given to the public (later sold at a minimum figure) and hauled away in big, horse-drawn wagons.





Rivet heater at Koebling Machine Company

supply of gas, the company was awarded the contract, and from that date until the lighthouse was equipped for electrical operation, it was renewed each year with unfailing regularity.

Although the 1900's saw the emergence of the Milwaukee Gas Light Company into a truly great utility, the period, as a whole, is bereft of the color and excitement that marked its early years. It has been, in fact, most aptly termed the "dark ages" — a period highlighted only by steady growth, an age of development from a fledgling gas works to a multi-million-dollar organization; from the rented rooms of its first office location to a towering 20-story building of its own, requiring one year to construct at a cost of approximately two million dollars. It was an era, too, in which the needs of the fast-growing suburban areas forced the formation of a number of affiliate companies to serve them, not because of financial inability on the part of the company this time, but because of an inherent clause in the franchise which forbade service beyond one mile of the city limits.

Thus it was that the Wauwatosa Gas Company was incorporated in July of 1901, the West Allis Gas Company in December, 1903, the Lakeshore Gas Company (serving the Whitefish Bay area) in April of 1925, and the Milwaukee Suburban, June,

1926 (renamed the Wisconsin Eastern Gas Company on February 1, 1927) which served North Milwaukee and the communities immediately north of the city as far as Port Washington, Cedarburg, West Bend and Hartford. In due time, however, all of these affiliate companies were consolidated into one unit (July 31, 1939) under the name of the Milwaukee Gas Light Company.

Even as the Gas Company was digging its roots deeper into the community life of the city, so, too, was Milwaukee developing into a metropolitan center. The days of the cutter races down Spring Street, and the torchlight processions that were an integral part of every big political campaign — all had long since become things of the past. Great stores took over where tiny merchants for years had vended their wares — the problem of the chain store system versus home ownership was argued vociferously and often.

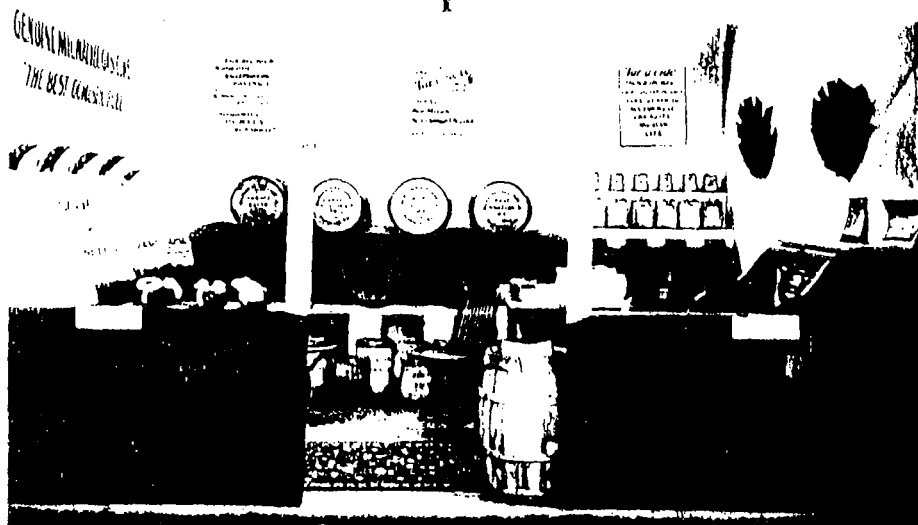
During this time, too, the city had won her first National Safety Council award, and her police department was already recognized as one of the nation's finest — the fire department one of the best-equipped. Her well-planned park system was one of the largest and best in the country, and recreational facilities and programs were being developed vigorously.

*Continued on page 38*

# MILWAUKEE GAS LIGHT CO.

GENUINE GAS COKE

TAR PRODUCTS



An industrial exhibit of coke products. The coke in those days was sold directly to the public in retail and carload lots by the company; the by-products to the Barrett Mfg. Co.

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SALUTE. (Continued from page 33)

Skyscrapers like the Gas Company, Wisconsin Telephone Company and First Wisconsin National Bank Buildings, the Mariner Tower (now the Wisconsin Tower), the Schroeder Hotel, the Wells and Herman Buildings (the latter now called the Railway Exchange Building), along with huge department stores and office buildings gave her downtown business and shopping districts a most "big city" air. In industry, in business, education and civic development, Milwaukee had indeed, in the twenties and thirties, grown up. But, her future like that of the Milwaukee Gas Light Company, held even greater advances in store.

By the late forties, facilities at the company had expanded tremendously. Where once it had but six miles of main, and the city as its only customer,

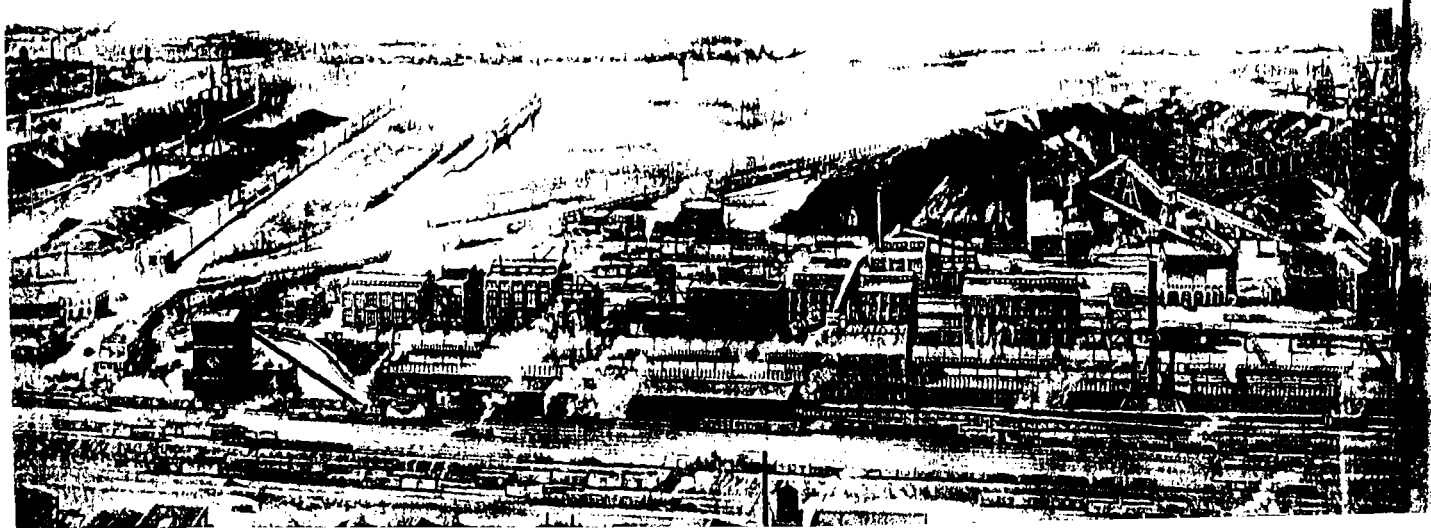
it now had 1600 miles of main and more than 200,000 regular users of gas. Its Third Ward Works had long since been revamped, and now included a carbureted water gas production plant, a purification plant, a meter testing and repair shop, consumers' appliance service and fitting shops, as well as garages, a storeroom, a district regulating station, pumping units and two holders.

The West Side Station maintained four storage holders having a total capacity of 21 million cubic feet, a pumping station, coal docks and general storage facilities, while the North Shop, or Cameron Avenue Station, served primarily as a compressor and pumping station to serve the northern part of its territory. Together, they comprised the company's complete plant operations.

Coke plant at the foot of West Greenfield Avenue.

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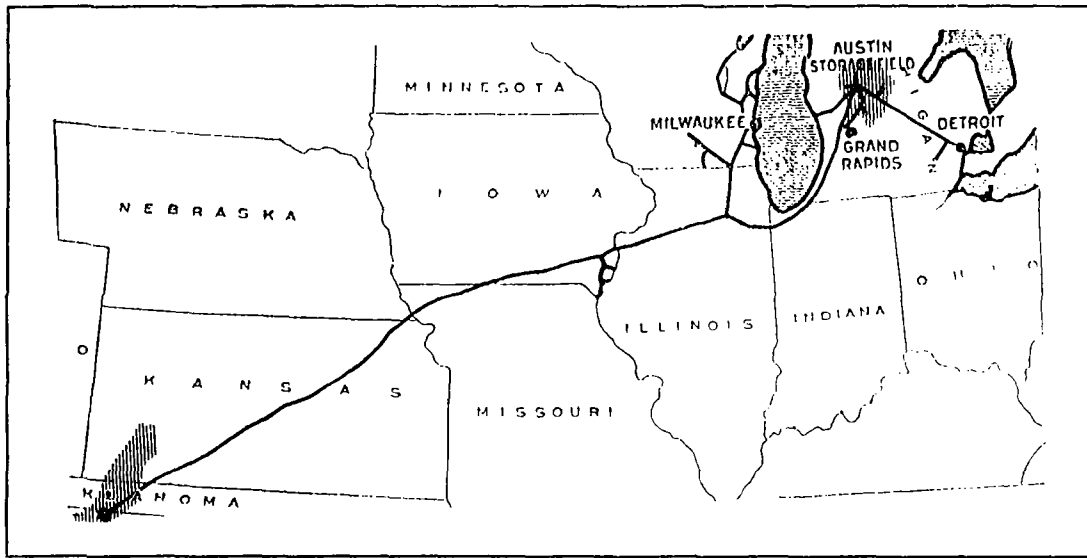


## New Horizons . . . With Natural Gas

By the fall of 1949 a new and even greater era was about to begin. The years of manufactured gas were at an end. The long, hard and sometimes bitter fight to introduce natural gas into Milwaukee and Wisconsin had finally been won. Opposition forces, and there were many, had, at last, been brought to see that natural gas would be a boon to industry—to domestic and commercial users alike. Common Council objections were

its termination point in west-central Michigan, where a feeder line carries service on to Detroit.

It was a difficult task beyond doubt, for the terrain was not conducive to pipeline operations. Rivers had to be crossed, swamplands drained, the open prairies crossed. Rocks and trees had to be uprooted and hills graded, but the outcome of this battle of man against Nature and the elements



hurdled and legislative action hindering its introduction was repealed. Ten years of wrangling and a city referendum indicating the Milwaukee voters' stand in the matter, had finally culminated in the approval, by the Public Service Commission of Wisconsin, of a change-over to natural gas by the Milwaukee Gas Light Company and seven other state utilities. The date was April 8, 1948.

Although the city did not give formal approval for the laying of the necessary pipelines within its corporate limits until September of the following year, actual field construction had begun a good many months before. The first of the 1100 mile pipeline from the Hugoton natural gas fields in the Kansas, Oklahoma and Texas area, was laid in Hansford County, Texas, in late December, 1947. Put down by the Michigan-Wisconsin Pipe Line Company, this great natural gas artery inched its way from northeastern Texas, across northern Oklahoma, Kansas, the tip of Missouri and a part of Iowa into Illinois, branching there north to Wisconsin, and southeast through Indiana, on to

(work went on winter and summer alike) was unquestioned. It could only be the kind of result that experienced men working with powerful equipment and quality materials, following a well-engineered plan, could produce. At any rate, the big 24-inch pipe was laid, not in "straight-as-an-arrow" fashion, but, of necessity with a slight curve here and there, though with no right angle bends. Surprisingly enough, for all the obstacles encountered along the way, work progressed ahead of schedule.

Back in Milwaukee, crews labored feverishly to install the necessary 22-inch feeder lines, some 15 miles of them, needed to carry the natural gas from the pipeline delivery station to the company's distribution system. Meanwhile, construction was begun on the delivery and sub-stations and every effort was made to correlate progress of the work here with that of the pipeline itself, so that everything would be in readiness for operation the moment the last foot of main was laid and conversion fully completed.

A gigantic undertaking, the conversion of appliances involved the acquiring and training of an efficient organization (approximately 1300 workers) to recondition each appliance using manufactured gas to the use of natural gas. Moreover, it meant that more than one-half million gas appliances — stoves, refrigerators, water heaters, and the like — had to be carefully serviced before the change-over could be made. A four and one-half million dollar project, this Herculean task, nevertheless, was completed in record time — just a matter of a few months, in fact, the work beginning September 26, 1949, and finally being completed January 8, 1950.

The long-awaited day when all was in readiness for the introduction of natural gas to the Milwaukee area came in the fall of 1949, just a few months under two years after the first shovelful of dirt had been turned over. Conversion was begun in an area in the far southwest part of the county, and quickly followed by section after section, until finally all of the territory had been changed over to natural gas service. In the early stages before the big pipeline was completed, natural gas was obtained from the Chicago District Pipeline Company, but, by late October, the cross-country line was put into operation and natural gas, at last, flowed direct from its source into the homes, hotels, factories and business houses of the city and suburbs. As is always the case when something new is introduced, adjustments had to be made. But, eventually, all was in order and the city, as well as the outlying districts in the company's service area, settled down to enjoy and to put to work — *natural gas*.

Although from then on, natural gas was to serve the city's users, the company, nevertheless, took steps at once to provide for uninterrupted service in case of an emergency. This action took the form of continued plant operation on a standby basis. The coke plant, for instance, was kept going at full capacity, manufacturing its normal amount of coke oven gas, most of which is taken on an interruptible basis by the Milwaukee sewage disposal plant. The latter, dually-equipped with gas and oil facilities, can quickly switch over to oil on very short notice, thereby allowing the full sup-

ply of daily coke oven gas output to be sent through the city mains should an emergency situation arise through a break in the natural gas transmission line. In addition, the Third Ward Works, which has been converted to high B.T.U. oil-gas operation, and the West Side plant — a liquefied petroleum storage farm — both stand ready for service in the event of an emergency.

With the introduction of natural gas and the many refinements made in home appliances — stoves, refrigerators, clothes dryers, water heaters, disposal units and heating equipment — domestic consumption of gas increased tremendously. But it is in the industrial gas field that the company has made its greatest strides. Unquestionably, gas today is the fuel of industry, and Milwaukee, undeniably, has much of that.

The users of gas are many — almost as diverse as the types of manufacturing enterprises it serves. From the heavy machinery and electrical equipment groups, to the paper products fabricators, the making industry and the can companies — gas performs many functions. Even the bakery and food groups — the meat packing plants, the breweries and the small tools industry find gas a helpful ally.

Indeed, though recognition of the advantages of gas in the industrial field came early, actual application was, in many instances, slow in taking hold. But, during the past few years, more and more acceptance has been noted, and today, Milwaukee Gas Light Company serves thousands of industrial users regularly. Commercial groups — stores, institutions, schools, hotels and the like, also consume huge quantities of gas daily in one form or another, with the domestic user, as always, remaining the primary company market and its first concern.

From the early stages of corporate existence, with very limited service and few customers, the scope of the company's operations has expanded to the extent that today more than 1,889 miles of main and feeder lines, in a service area of 544 square miles, bring to industry — to business and to the homes of 225,706 customers, gas, "the fuel that does everything better — naturally."

Trenching

# Gas Co. Grows With Community

By **WALTER G. WEGNER**

*Sentinel Business Editor*

The city fathers of 1851 were unimpressed when a young engineer from Cincinnati turned up with a proposal to build a municipal water works and sewage disposal plant for the five year old city.

Aldermen listened to his story and told him:

"Every property owner has a well and a pump at the back door and outdoor plumbing in the yard. Why should a lot of money be spent for a sewage and water system?"

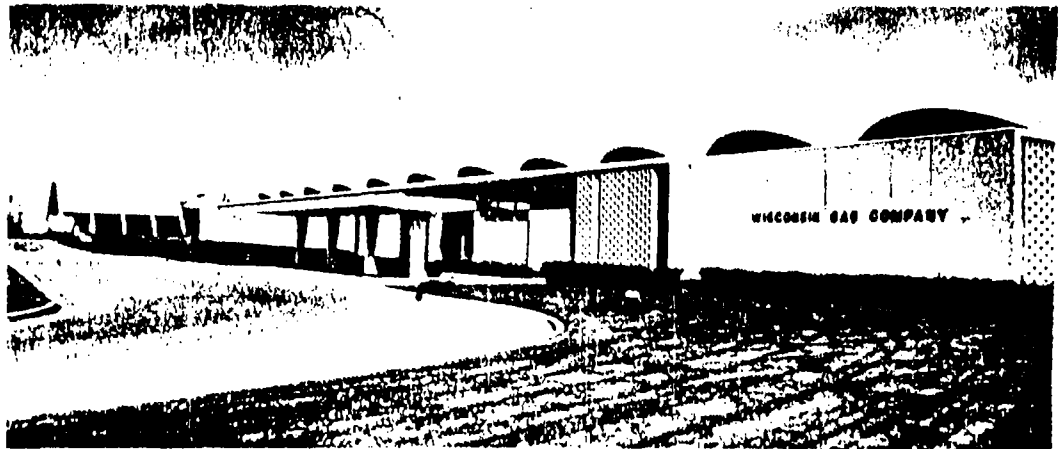
The engineer, John Lockwood, took his plans back to Cincinnati. He returned a few months later with a new idea—a municipal gas plant. The aldermen were more receptive. Early in 1852 construction started on the city's first public utility and one of the few century old industries still growing with the community.

Hans Crocker was mayor in 1852—the term was for one year—Milwaukee had 27,000 residents, and the heads of government were persuaded that it would hardly do for Milwaukee to fall behind its neighbor, Chicago, which was already lighting its streets with gas.

Lockwood recruited a half dozen businessmen and together they organized the Milwaukee Gas Light Co. It was granted a charter on Mar. 27, 1852, "perpetuating its existence" and giving it an exclusive franchise to serve the city.

Lockwood's agreement with the city called for building the gas plant, laying six miles of underground main, installing 100 meters and other equipment and supplying 350 tons of coal, an eight month supply.

A plant site was already available. In late 1851, Lockwood had bought five lots on the west side of Jefferson st.



This is the north service center of the Wisconsin Gas Co. located at N. Green Bay av. and W. Silver Spring dr. This modern structure handles many company

operations for an area that extends from North av. to as far as West Bend, Hartford and other territory serviced by the utility. It was built in 1963.

between Menomonee and Juneau (now Corcoran av.). The cost of the new utility was to be \$149,000, the money to be raised through the sale of 3,000 shares of stock at \$50 each.

## First President

Articles of association were filed with the state, listing as incorporators and trustees William P. Lynde, John Lockwood, James H. Rogers, David P. Hull and James Kneeland, who became the first Gas company president.

At the first board meeting Rogers was elected president to succeed Kneeland, who was named treasurer. Hull continued as secretary. Stockholders elected Alexander Mitchell, early day financier and banker, to the board to succeed Lynde.

Official municipal records show that Lockwood was obligated to "finish and complete" his project in 1852 and "to furnish the city of Milwaukee with good gas for all the public lamps that might from time to time be installed, the city of Milwaukee agreeing to pay \$2.50 per thousand cubic feet at the end of each quarter during which gas was furnished."

Financing the utility wasn't

easy. Many settlers had used their savings to pay for the costly journey that brought them west, to set up their homes and workshops. Money was tight and interest rates climbed to 10% but the new company cleared the roadblock.

## City Grows

Meanwhile, the city's boundaries were pushing to Brady st., on the east side of the river, Walnut st. on the west side, Greenfield av. to the south, Lake Michigan on the east and on the west side to about 12th st.

It was still a few years away from cedar block streets but with progress in all directions it was high time the community had a first class street lighting system.

By the fall of 1852, the gas works was completed and a civic celebration was set for Nov. 17. But there was an unexpected delay. A visitor to the new plant the day before turned on the gas cocks "to see what would happen." A candle flame ignited accumulated gas and a wall of the plant was blown out.

## "Biggest Event"

The ceremony was reset for Nov. 23. The Milwaukee Senti-

nel said the event "was the biggest thing that ever happened to Milwaukeeans as for the first time in city history the streets were brilliantly lighted."

E. Water st. from Erie to the City Hall square became what the paper called "the great white way of the time."

Lights lined all the main streets—Jefferson, Milwaukee, Main, Huron, Erie, Wisconsin, Market square, Spring, Second, Third and Chestnut. The city, said The Sentinel, was now on a par with Baltimore, the first city to be lighted by gas.

A municipal celebration was held in Young's hall, lighted by two huge gas chandeliers. Everybody was there. Mayor Crocker headed the official delegation, which also included Bryon Kilbourn; Rufus King, early editor of The Sentinel and later Milwaukee's first school superintendent; Garret Vlieta, and former Mayor D. A. J. Upham, who was master of ceremonies.

The city was the gas company's sole customer until a month or so after the service was begun when the public was permitted to "subscribe." One of the first was Rufus King and

paper which got two  
in The Sentinel office.

early subscribers were  
that have attached to  
business history for  
a century—Guido  
Pritzlaff Hardware Co.  
American Express Co.

Kilbourn's home was  
the first residences to  
light. Solomon Ju-  
no with Kilbourn and  
Walker had founded the  
city, had left in 1851 to  
the village of Theresa,  
Walker, who founded  
Point (west of the Kin-  
river and south of the  
rivers and Milwaukee riv-  
outside the service

### Big Business

March, 1857, the Milwau-  
Light Co. had 889 cus-  
and its annual report  
It had sold 16,290,000  
feet of gas, of which the  
1,700,000 cubic feet.  
years later sales were  
million cubic feet.

the days of gas light  
with the street lamps  
the singing lamplighter—  
company met the change  
in increasing volume of  
industrial and commercial uses.  
significant events in the  
times was that of  
when company employees  
special hotel range in  
company shops to be in-  
in the old Plankinton  
on Grand av. Soon after,  
later hotel was converted

distribution system and  
reached out toward the  
and new company out-  
lets were added. Inadequate  
buildings were replaced  
1930 the company com-

pleted its modern 20 story  
building.

The company's major growth  
started when natural gas was  
brought to the city. It was a 10  
year campaign for the company  
before municipal regulatory au-  
thorities came to see eye to eye  
with the utility.

Finally — Jan. 3, 1947 — the  
Wisconsin Public Service Com-  
mission gave authority to the  
Michigan Wisconsin Pipe Line  
Co. to pipe natural gas into the  
state.

Gas operations underwent  
radical changes because of the  
methods of distributing the nat-  
ural gas compared with that of

manufactured gas in use for al-  
most a century.

Outdated operating and gas  
manufacturing facilities were  
replaced. South and North  
Service Centers, up to the min-  
ute operating quarters, were  
built as part of the big job of  
changing over.

Included in the change was  
the utility's name. On Dec. 31,  
1965, the company became  
known as the Wisconsin Gas  
Co., signifying its expanded op-  
erations.

The 18 million cubic feet of  
manufactured gas produced in a  
12 month period more than 100  
years ago is now matched by  
the 82 billion cubic feet of nat-

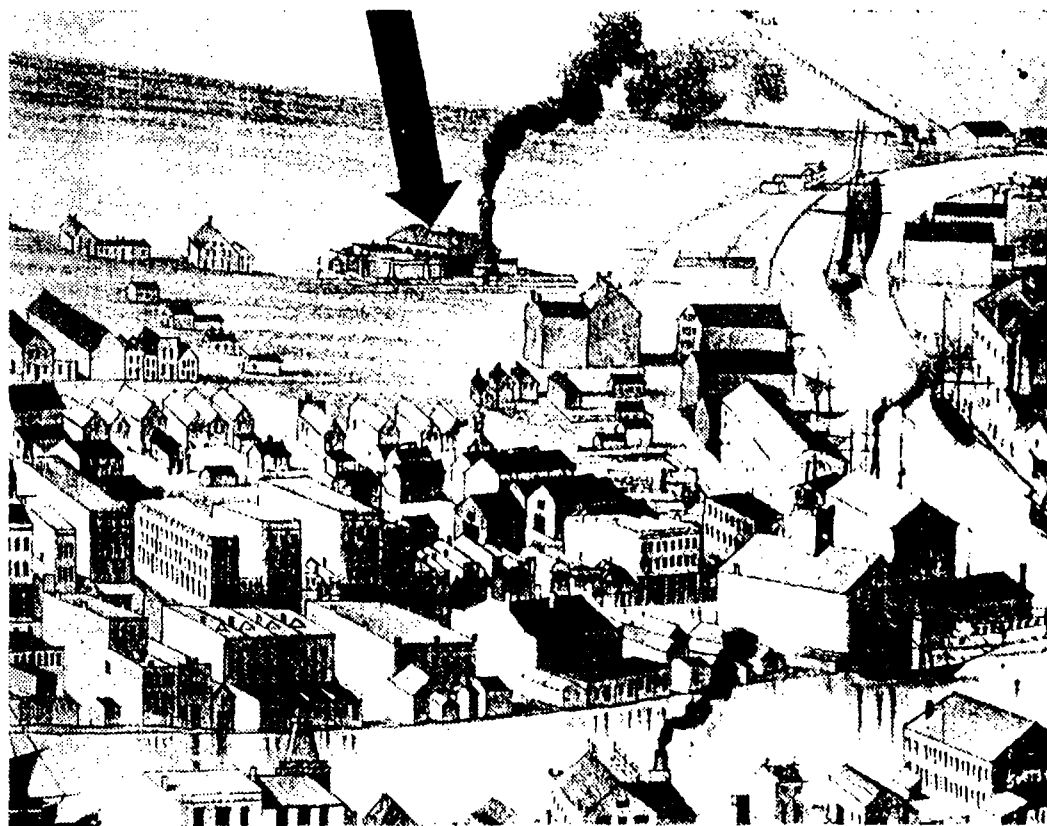
ural gas sold by the company in  
1965.

From the 34 million dollars  
invested in plant only 15 years  
ago, the figure has climbed to  
186 million now. Gas sales  
were 13.2 million dollars in



Howard J.  
Tobin

1950. Last year they were 73.4  
million, according to Howard  
J. Tobin, president.



Milwaukee was already acquiring a met-  
ropolitan look, according to the artist's  
sketch, when it got its first public utility

in 1852. It was the old Milwaukee Gas  
Light Co. plant, called the Third Ward  
plant, at the foot of N. Jefferson st.



## Wisconsin Gas Company

# State's oldest utility fostered economic growth

Wisconsin Gas Company—founded as The Milwaukee Gas Light Company—was the first public utility in the state of Wisconsin. It began with an agreement between a young engineer from Cincinnati, John Lockwood, and the city of Milwaukee in 1851.

Up to that time, lighting in Milwaukee was poor, consisting of tallow dips and whale oil lamps in the buildings of the city. Lockwood proposed to the city that he would construct a gas works and, upon its completion, would furnish "good gas for all the public lamps that might from time to time be installed."

After a period of study, the city and Lockwood came to an agreement, and on January 3, 1852, Lockwood and four other Milwaukee citizens joined together in an association to be known as the Milwaukee Gas Light Company. On March 27, 1852, by legislative act, the Milwaukee Gas Light Company received from the state a charter giving it the right to perpetual existence and an exclusive franchise to serve the city of Milwaukee.

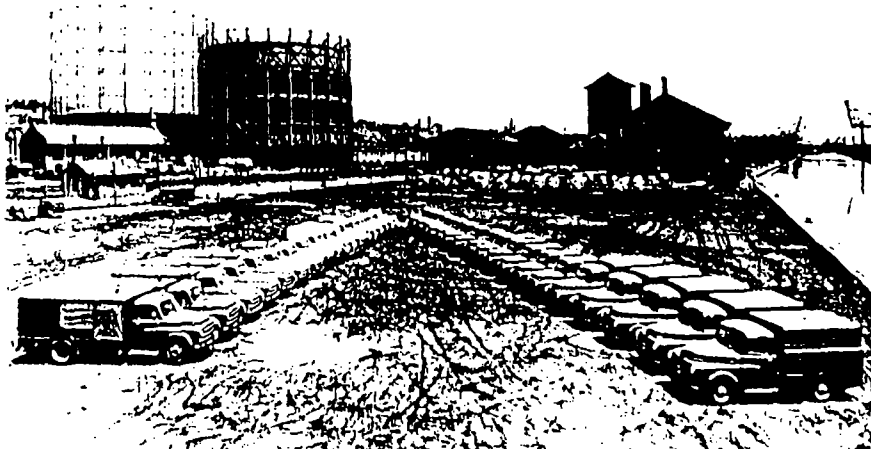
Construction of the original gas manufacturing plant—Third Ward Gas Works—was completed in the fall of 1852. The original facilities included six miles of main, 100 meters, and the plant itself, where gas was manufactured from coal. Total cost of these facilities was \$150,000.

The first company gas "turn on" and celebration took place on November 23, 1852. In describing the event, the *Milwaukee Daily Sentinel* said, "It was the biggest thing that ever happened to Milwaukeeans, as for the first time in city history, the streets were brilliantly lighted." Two months after the ceremony, the company was offering both domestic and commercial lighting service to the public.

Five years later, the company had 889 customers. Total annual gas sales exceeded sixteen million cubic feet.

Between 1863 and 1926, Milwaukee Gas Light expanded through acquisition of one competitor—which had been chartered in 1856 as the Fifth Ward Gas Light Company in violation of the Milwaukee Gas Light Company's exclusive franchise—and establishment of four affiliated companies to service Milwaukee suburbs.

In 1901, Milwaukee Gas Light became a part of the American Natural Gas



*The old west side gas manufacturing plant of Wisconsin Gas Company in the early 1950s still possessed holders (upper left) containing gas made from coal. For a time, it was mixed with the new natural gas used to serve Milwaukee. Service vehicles of the era are in the foreground.*

Company System, known then as American Light and Traction Company, and today as American Natural Resources Company.

In 1930, Milwaukee Gas Light completed construction of its present general office building, located at 626 East Wisconsin Avenue in downtown Milwaukee.

The period of most decisive growth for Milwaukee Gas Light began in 1949 with the introduction of natural gas to the state. The greatest challenge facing the company at the time of the transition was converting appliances from the use of manufactured to natural gas. Within a three month period, some 1,300 trained company servicemen converted and serviced more than 500,000 appliances. The approximate cost of this undertaking was \$4.5 million.

Milwaukee Gas Light began expansion outside of the city in 1960, and five years later adopted the name Wisconsin Gas Company to reflect its larger service area.

On June 30, 1975, the company, which had been a subsidiary of the American Natural Gas Company System, gained independent status and Wisconsin Gas stock made its debut on the New York Stock Exchange.

In 1978, Wisconsin Gas formed WEXCO of Delaware, Inc., as a subsidiary company to engage in gas and oil exploration



*The current Wisconsin Gas main office building has been a Milwaukee landmark since 1930.*

through financial participation with producers.

Common and preferred shareholders of Wisconsin Gas approved a reorganization proposal in April 1980 which created the holding company, WICOR, Inc., as the parent company of Wisconsin Gas and WEXCO. The reorganization was aimed at eventual diversification into other businesses. However, the utility operations of Wisconsin Gas remain the principal business of WICOR.

Wisconsin Gas is the largest natural gas distribution utility in Wisconsin. It provides natural gas service to more than 404,000 customers in 42 counties throughout Wisconsin.

CLEVELAND CLIFFS

#5984

HISTORY (CORPORATE) (2 OF 2)

-29-

## AGREEMENT OF MERGER

This Agreement of Merger dated this 7<sup>th</sup> day of October, 1944, made by and between KOPPERS COMPANY, INC., KOPPERS COMPANY, THE KOPPERS ERECTING CORPORATION, KOPPERS UNITED COMPANY, and FUEL INVESTMENT ASSOCIATES,

### WITNESSETH:

WHEREAS, KOPPERS COMPANY, INC., has heretofore been duly organized under and by virtue of the General Corporation Law of the State of Delaware, the certificate of incorporation of which was filed in the office of the Secretary of State of Delaware on September 30, 1914, and recorded in the office of the Recorder of Deeds for the County of New Castle, Delaware, on September 30, 1914; and KOPPERS COMPANY, INC., has an authorized capital stock consisting of two million three hundred thousand (2,300,000) shares divided into three hundred thousand (300,000) shares of Preferred Stock of the par value of One Hundred Dollars (\$100.00) each, amounting in the aggregate to Thirty Million Dollars (\$30,000,000) and two million (2,000,000) shares of Common Stock of the par value of Ten Dollars (\$10.00) each, amounting in the aggregate to Twenty Million Dollars (\$20,000,000), of which capital stock no shares of such Preferred Stock and one hundred (100) shares of such Common Stock are now issued and outstanding; and the principal office of KOPPERS COMPANY, INC., in the State of Delaware is located at 100 West Tenth Street in the City of Wilmington, County of New Castle, and the name and address of its resident agent is The Corporation Trust Company, 100 West Tenth Street, Wilmington, Delaware; and

WHEREAS, KOPPERS COMPANY has heretofore been duly organized under and by virtue of the General Corporation Law of the State of Delaware, the certificate of incorporation of which was filed in the office of the Secretary of State of Delaware on January 25, 1927, and recorded in the office of the Recorder of Deeds for the County of New Castle, Delaware, on January 25, 1927; and KOPPERS COMPANY has an authorized capital stock consisting of one million five hundred thousand (1,500,000) shares divided into five hundred thousand (500,000) shares of Preferred Stock of the par value of One Hundred Dollars (\$100.00) each, amounting in the aggregate to Fifty Million Dollars (\$50,000,000), and one million (1,000,000) shares of Common Stock of the par value of Twenty Dollars (\$20.00) each, amounting in the aggregate to Twenty Million Dollars (\$20,000,000), of which capital stock two hundred thousand (200,000) shares of such Preferred Stock and one million (1,000,000) shares of such Common Stock are now issued and outstanding; and the principal office of KOPPERS COMPANY in the State of Delaware is located at 100 West Tenth Street in the City of Wilmington, County of New Castle, and the name and address of its resident agent is The Corporation Trust Company, 100 West Tenth Street, Wilmington, Delaware; and

WHEREAS, THE KOPPERS ERECTING CORPORATION has heretofore been duly organized under and by virtue of the General Corporation Law of the State of Delaware, the certificate of incorporation of which was filed in the office of the Secretary of State of Delaware on October 5, 1927, and recorded in the office of the Recorder of Deeds for the County of New Castle, Delaware, on October 5, 1927; and THE KOPPERS ERECTING CORPORATION has an authorized capital stock consisting of one thousand (1,000) shares of Common Stock without nominal or par value, of which Common Stock five hundred (500) shares are now issued and outstanding and five hundred (500) shares are held in the treasury of the corporation; and the principal office of THE KOPPERS ERECTING CORPORATION in the State of Delaware is located at 100 West Tenth Street in the City of Wilmington, County of New Castle, and the name and address of its resident agent is The Corporation Trust Company, 100 West Tenth Street, Wilmington, Delaware; and

WHEREAS, KOPPERS UNITED COMPANY is an unincorporated association or trust having outstanding shares of stock or other evidences of financial or beneficial interest therein,

which was formed under the laws of the Commonwealth of Massachusetts by a Declaration of Trust dated April 24, 1931, and filed in the office of the Commissioner of Corporations and Taxation of the Commonwealth of Massachusetts on April 24, 1931; and KOPPERS UNITED COMPANY has authorized three million twenty-five thousand (3,025,000) shares divided into twenty-five thousand (25,000) Preferred Shares of the par value of One Hundred Dollars (\$100.00) each, amounting in the aggregate to Two Million Five Hundred Thousand Dollars (\$2,500,000) and three million (3,000,000) Common Shares of the par value of One Dollar (\$1.00) each, amounting in the aggregate to Three Million Dollars (\$3,000,000), all of which authorized shares are now issued and outstanding; and the principal office of KOPPERS UNITED COMPANY is located at 250 Stuart Street in the City of Boston, Massachusetts; and

WHEREAS, FUEL INVESTMENT ASSOCIATES is an unincorporated association or trust having outstanding shares of stock or other evidences of financial or beneficial interest therein, which was formed under the laws of the Commonwealth of Massachusetts by a Declaration of Trust dated May 3, 1929, and filed in the office of the Commissioner of Corporations and Taxation of the Commonwealth of Massachusetts on May 3, 1929; and FUEL INVESTMENT ASSOCIATES has authorized three hundred eighteen thousand six hundred thirty (318,630) shares divided into three hundred fifteen thousand six hundred thirty (315,630) Preferred Shares without nominal or par value, and three thousand (3,000) Common Shares of the par value of One Dollar (\$1.00) each, amounting in the aggregate to Three Thousand Dollars (\$3,000), all of which authorized shares are now issued and outstanding; and the principal office of FUEL INVESTMENT ASSOCIATES is located at 250 Stuart Street in the City of Boston, Massachusetts; and

WHEREAS, The General Corporation Law of the State of Delaware, and particularly Sections 59 and 59B thereof, permits and provides for the merger of two or more corporations existing under the laws of the State of Delaware and any one or more corporations existing under the laws of the State of Delaware with one or more joint-stock associations as defined by said Section 59B, except a joint-stock association formed under the laws of a state which forbids such merger; and

WHEREAS, KOPPERS UNITED COMPANY and FUEL INVESTMENT ASSOCIATES are both joint-stock associations within the meaning of said Section 59B, and the laws of the Commonwealth of Massachusetts do not forbid such merger, and the said Declarations of Trust of KOPPERS UNITED COMPANY and FUEL INVESTMENT ASSOCIATES expressly provide therefor; and

WHEREAS, Each of the parties hereto desires in pursuance of the terms of said General Corporation Law of the State of Delaware, and particularly Sections 59 and 59B thereof, to enter into an Agreement of Merger by which KOPPERS COMPANY, THE KOPPERS ERECTING CORPORATION, KOPPERS UNITED COMPANY and FUEL INVESTMENT ASSOCIATES shall be merged into KOPPERS COMPANY, INC.;

Now, THEREFORE, in consideration of the premises and of the terms and conditions herein set forth, each of the parties hereto by its respective Board of Directors or Board of Trustees, as the case may be, has agreed and does hereby agree each with the other, subject to the approval of its respective stockholders or share-holders duly given, as follows:

#### SECTION 1.

KOPPERS COMPANY, THE KOPPERS ERECTING CORPORATION, KOPPERS UNITED COMPANY and FUEL INVESTMENT ASSOCIATES shall be and hereby are merged into KOPPERS COMPANY, INC., as the single surviving corporation, pursuant to the laws of the State of Delaware, and the corporate existence of KOPPERS COMPANY,

INC. shall continue under the laws of the State of Delaware, and its name is and shall continue to be "KOPPERS COMPANY, INC."

## SECTION II.

The terms and conditions of such merger, the mode of carrying the same into effect and such other facts required or permitted by the General Corporation Law of the State of Delaware to be set out in a certificate of incorporation as can be stated in the case of such merger, stated in such altered form as the circumstances of the case require, as well as the manner of converting the shares of each of the constituent corporations and joint-stock associations into shares or other securities of the corporation surviving such merger, with such other details and provisions as are deemed necessary, are:

### ARTICLE ONE:

The name of the corporation surviving such merger is KOPPERS COMPANY, INC. (hereinafter referred to in this Section II as "this Corporation").

### ARTICLE TWO:

The principal office or place of business of this Corporation in the State of Delaware is and shall continue to be located at No. 100 West Tenth Street in the City of Wilmington, County of New Castle, and the name and address of its resident agent is and shall continue to be The Corporation Trust Company, No. 100 West Tenth Street, Wilmington, Delaware.

### ARTICLE THREE:

The nature of the business of this Corporation and the objects and purposes proposed to be transacted, promoted and carried on by it are as follows:

1. To purchase, acquire, sell, hold, exchange, pledge, hypothecate, deal in and dispose of stocks, bonds, notes, debentures or other evidences of indebtedness and obligations and securities of any individual, partnership, corporation, company or joint-stock association, domestic or foreign, or of any domestic or foreign state, government, or governmental authority or of any political or administrative subdivision or department thereof, and certificates or receipts of any kind representing or evidencing any interest in any such stocks, bonds, notes, debentures, evidences of indebtedness, obligations or securities; and, while the owner or holder of any such stocks, bonds, notes, debentures, evidences of indebtedness, obligations, securities, certificates or receipts to exercise all the rights, powers and privileges of ownership in respect thereof, including the right to vote thereon for any and all purposes.

2. To purchase or otherwise acquire, or obtain the use of, and to hold, maintain, develop, sell, lease, exchange, hire, convey, mortgage or otherwise dispose of or turn to account lands and leaseholds and any interests, estates and rights in real property, and any rights, licenses and privileges, appurtenant to such property; to erect, construct, make, improve and operate or aid or subscribe for the erection, construction, making, improvement and operation of houses, buildings, plants, factories, stores, shops, offices, warehouses, mills, mines, wells, equipment, machinery and facilities of every kind and character and any and all other structures and erections of every description upon such property or which may appertain thereto or which may be necessary, useful, convenient or appropriate in connection therewith or with the business of this Corporation or any corporation, association, co-partnership or individual in which this Corporation shall be in any manner interested.

3. To own, lease or otherwise acquire stores, and to do a general merchandise business; to engage in any manufacturing, processing, mining, refining, trading, mercantile, commercial,

shipping or transportation business, enterprise, venture or pursuit of any kind or character whatsoever, and to that end or for the purpose of investment or otherwise to acquire, lease, hold, own and dispose of or turn to account any and all property, real, personal or mixed, assets, stocks, bonds and rights of any and every kind, and to acquire, conduct, manage, operate or control the whole or any part of any such business conducted, managed, operated or controlled by any other corporation, association, co-partnership or individual.

4. To improve, manage and deal in real property, including the building, construction and alteration of houses and other structures thereon, and the development of real property generally, the buying, selling and exchanging of real property and the renting and leasing of real property, improved and unimproved; to give mortgages on real property and borrow money thereon, by mortgage or otherwise; to loan money upon real property and to take mortgages and assignments of mortgages on the same; to buy, sell and deal in bonds and loans secured by mortgages or other liens on real property.

5. To adopt, apply for, obtain, register, purchase, lease, take assignments or licenses of or otherwise acquire, or obtain the use of and to hold, protect, own, use, develop, introduce and otherwise dispose of, and to sell, assign, lease, grant licenses or other rights in respect to, and make contracts concerning or otherwise deal with, dispose of or turn to account any copyrights, trade-marks, trade names, brands, brand names, labels, patent rights, letters patent and patent applications of the United States of America or of any other country, government or authority, and any inventions, improvements, processes, formulae, mechanical and other combinations, licenses and privileges, whether in connection with or secured under letters patent or otherwise, to carry on any business whether manufacturing or otherwise, which is or shall be necessary, convenient, advisable or adaptable for the utilization by this Corporation in any way, directly or indirectly, of such letters patent and patent applications, trade-marks, trade names, copyrights and pending applications therefor, inventions, improvements, processes, formulae, mechanical and other combinations, licenses and privileges, or other items above mentioned.

6. To organize and to promote, and to facilitate the organization and promotion of subsidiary companies, and to convey, transfer or assign all or any part of its assets to any subsidiary company or companies in exchange for shares of the capital stock or other securities of such subsidiary company or companies, or otherwise.

7. To aid by the lending of money or in any other manner whatsoever, any corporation, association, co-partnership or individual and to do any acts or things which are or may appear necessary, useful, convenient or appropriate for the preservation, protection, improvement or enhancement of the value of the business or property of any corporation, association, co-partnership or individual.

8. To guarantee the payment of any dividends upon any stock and the principal or interest, or both, of or on any bonds or other obligations of any corporation, association, co-partnership or individual, and to guarantee the performance and fulfillment of any contracts or obligations made or entered into by any corporation, association, co-partnership or individual.

9. To enter into, make and perform contracts of every sort and description with any person, firm, association, corporation, municipality, body politic, county, state or government or colony or dependency of either thereof.

10. To acquire its own bonds or other obligations or shares of its capital stock and to resell or otherwise dispose of the same from time to time.

11. To borrow or raise money for any of the purposes of this Corporation, to issue bonds, debentures, notes or other obligations of any nature or in any manner for money so borrowed

without limit as to amount, and if and to the extent so determined to secure the principal thereof, and the interest thereon, by mortgage upon, or pledge or conveyance or assignment in trust of, the whole or any part of the property of this Corporation, real or personal, including contract rights either at the time owned or thereafter acquired or in any other manner.

12. To acquire all or any part of the good will, rights, property and business of any person, firm, association or corporation heretofore or hereafter engaged in any business, to pay for the same in cash or stock or bonds of this Corporation or otherwise, to hold, utilize, or in any manner dispose of the whole or any part of the rights and properties so acquired, and to assume in connection therewith any liabilities of any such person, firm, association or corporation and conduct in any lawful manner the whole or any part of the business thus acquired.

13. To conduct its business in all or any of its branches in the State of Delaware and in any or all other States, territories, possessions, colonies and dependencies of the United States of America and in the District of Columbia, and in any one or more foreign countries; to have one or more offices within or without the State of Delaware; and to carry on all or any of its operations and business without restriction or limit as to amount; and to hold, purchase, mortgage and convey real and personal property both within and without the State of Delaware.

14. Without limiting the generality of the foregoing, to carry on all business relating to the production, manufacture, processing and sale of crude and refined coal tar products, treated and untreated forest products, coal, coke and gas, machine shop and foundry products, piston rings, and the design, construction and operation of by-product coke plants, coke ovens, chemical plants and related auxiliary equipment and structures.

15. To carry out all or any part of the foregoing objects and purposes as principal, agent, contractor or otherwise, either alone or in conjunction or partnership with any other persons, firms, associations or corporations and in any part of the world, and in carrying on any of its business and for the attainment or furtherance of any of its objects and purposes to make and perform such agreements and contracts of any kind and description, and to do such acts and things and to exercise any and all such powers as a natural person could lawfully make, perform, do or exercise and, as aforesaid, to do anything and everything which is or may appear necessary, useful, convenient or appropriate for the attainment, furtherance or exercise of any of its purposes, objects or powers if not inconsistent with the laws of the State of Delaware; but this Corporation shall not by any implication or construction be deemed to possess the power of issuing bills, notes or other evidences of debt for circulation as money, or the power of carrying on the business of receiving deposits of money or the business of buying gold and silver bullion or foreign coins, or of constructing, maintaining or operating public utilities within the State of Delaware, and nothing in the purposes, objects and powers hereinbefore stated shall be construed to give this Corporation any rights, powers or privileges not permitted by the laws of the State of Delaware to corporations organized under the laws of the State of Delaware.

The specification herein contained of particular powers of this Corporation is not in limitation, but rather in furtherance of the powers granted to this Corporation under the laws of the State of Delaware under and pursuant to the provisions of which this Corporation is formed, it being intended that this Corporation shall be authorized to do or cause to be done all things permitted by any statute or law of the State of Delaware applicable to this Corporation.

#### ARTICLE FOUR:

The total number of shares of stock which this Corporation shall have authority to issue is two million three hundred thousand (2,300,000) shares of which three hundred thousand (300,000) shares shall be Preferred Stock having a par value of One Hundred Dollars (\$100.00) per share and amounting in the aggregate to Thirty Million Dollars (\$30,000,000).

and the remaining two million (2,000,000) shares shall be Common Stock of the par value of Ten Dollars (\$10.00) per share and amounting in the aggregate to Twenty Million Dollars (\$20,000,000), or a total aggregate authorized capital of Fifty Million Dollars (\$50,000,000).

The description of the various classes of the above shares of stock and the preferences, qualifications, limitations, restrictions and the special or relative rights or limitations granted to or imposed upon the shares of stock of each class and of each series thereof, except as herein authorized to be determined by the Board of Directors in respect of any particular class or series, are as follows:

A. No holder of any of the Preferred Stock or Common Stock of this Corporation shall be entitled or have any right, as such holder, to subscribe for or to purchase any part of any issue of shares of stock of any class whatever which this Corporation may hereafter issue or sell or any obligations or securities of whatever kind and character which this Corporation may hereafter issue or sell that are convertible into or exchangeable for any shares of stock of this Corporation or to which shall be attached or to which appertain any warrant or other instrument conferring upon the holder or owner thereof the right to subscribe for or purchase from this Corporation any of its shares of stock.

B. Except as otherwise provided herein or as otherwise required by law, the entire voting power of this Corporation shall be vested exclusively in the holders of its Common Stock and the holders of the Preferred Stock shall not have any voting power or any right to participate in any meeting and shall not be considered stockholders for the purpose of any election, meeting, consent or waiver of notice; provided, however, that if, whenever and during the period that four (4) or more, and less than twelve (12), quarterly dividends on any series of the Preferred Stock shall have accrued and be unpaid, the holders of the Preferred Stock, voting as one class under the provisions for cumulative voting contained in Article Seven hereof, shall forthwith become entitled to elect the minimum number of directors necessary to constitute one-third ( $\frac{1}{3}$ ) of the members of the Board of Directors, and if, whenever and during the period that twelve (12) or more quarterly dividends on any series of the Preferred Stock shall have accrued and be unpaid, the holders of the Preferred Stock, voting as one class under the said provisions for cumulative voting, shall forthwith become entitled to elect the minimum number of directors necessary to constitute a majority of the Board of Directors, and thereafter as long as such right of the holders of the Preferred Stock to elect members of the Board of Directors continues said holders of the Preferred Stock shall be entitled to notice of all meetings of stockholders of this Corporation at which members of the Board of Directors of this Corporation are to be elected. Whenever either of such rights shall accrue to the Preferred Stockholders, the Secretary of this Corporation, upon the request of the holders of twenty-five per cent. (25%) or more of the outstanding Preferred Stock give notice to all of the stockholders of a special meeting of all of the stockholders for the election of a new Board of Directors, and upon the election and qualification of such new Board of Directors, the term of office of the members of the Board of Directors as theretofore constituted shall forthwith cease. Such voting rights in the case of twelve (12) or more quarterly dividends having accrued and being unpaid shall continue until the accrued and unpaid quarterly dividends are less than twelve (12) in number and such voting rights and the consequent right to notice of meetings of stockholders for the election of members of the Board of Directors, in the case less than twelve (12) quarterly dividends having accrued and being unpaid shall continue until all arrears shall have been paid. As the foregoing respective rights of the holders of the Preferred Stock shall terminate the Secretary of this Corporation shall forthwith, at the direction of the Chairman of the Board or the President or of holders of twenty-five per cent. (25%) of the Common Stock, call a meeting of the holders of the Preferred Stock and the Common Stock or a meeting of the holders of the Common Stock, as the case may be, for the election of a new Board of Directors and upon the election and qualification of such new Board of Directors the term of office of members of the Board of Directors as theretofore constituted shall forthwith cease. Whenever a vote of the Preferred Stock as a class is to be obtained under the provisions of this Paragraph B, twenty-five per cent. (25%) of the number of shares entitled to vote shall be necessary to constitute a quorum.



C. The Preferred Stock of the par value of One Hundred Dollars (\$100.00) per share may be divided into series and may be issued from time to time in series, each of which series shall be so designated as to distinguish the shares thereof from the shares of all other series and classes. Each series of the Preferred Stock shall consist of such number of shares as shall be fixed and determined in the resolution or resolutions adopted by the Board of Directors establishing such series; provided, however, that the total number of shares of Preferred Stock of all series at any one time outstanding shall not exceed in the aggregate the number of shares of such Preferred Stock authorized. All shares of any one series shall be alike in every particular. All shares of Preferred Stock shall be identical except that there may be variations between the different series as to the rate of dividend, the price at and the terms and conditions on which shares may be redeemed, the amounts payable upon shares in event of a voluntary liquidation, dissolution or winding up, sinking fund provisions for the redemption or purchase of shares in the event the shares of any series are issued with sinking fund provisions, and the terms and conditions upon which shares may be converted in the event the shares of any series are issued with the privilege of conversion. Subject to the other provisions of this Article Four the Board of Directors is hereby expressly vested with authority from time to time by resolution to divide the Preferred Stock into series, to create, establish and provide for the issuance of each such series, and to fix and determine the relative rights and preferences of any and all series so established in the following respects:

(1) the designation of each such series (which may be by a number, letter or title) so as to distinguish the shares thereof from the shares of all other series and classes;

(2) the rate or rates of dividends upon each such series;

(3) the price at which and the terms and conditions on which shares of each such series may be redeemed, which price, terms and conditions may, but need not, vary according to the time or circumstances of such redemption;

(4) the amounts payable upon shares in event of a voluntary liquidation, dissolution or winding up, which amounts may, but need not, vary according to the time or circumstances of such liquidation, dissolution or winding up; but which in any event shall include all accrued and unpaid dividends on such shares at the time of the liquidation, dissolution or winding up;

(5) subject to any limitations imposed by law, the sinking fund provisions, if any, for the redemption or purchase of shares of each such series; and

(6) whether the shares of any series may be converted, and in the event that the shares of any series are issued with the privilege of conversion, the terms and conditions on which shares may be converted and the class or classes or series of shares of this Corporation into which or for which such shares may be converted.

D. The Preferred Stock shall be preferred over the shares of stock of all other classes as to assets and in the event of any liquidation, dissolution or winding up of this Corporation, the holders of the Preferred Stock shall be entitled to receive out of the assets of this Corporation available for distribution to its shareholders, an amount which, in the event that such liquidation, dissolution or winding up is involuntary, shall be equal to One Hundred Dollars (\$100.00) plus all accrued and unpaid dividends, and which, in the event that such liquidation, dissolution or winding up is voluntary, shall be equal to the preferential amounts determined as hereinabove provided, for each share of Preferred Stock held by them before any distribution of the assets shall be made to the holders of shares of stock of any other class, but the holders of such Preferred Stock shall be entitled to no other or further amounts and the holders of the Common Stock shall be entitled, to the exclusion of the holders of the Preferred Stock, to share ratably according to the number of shares held by each in all of the assets of this Corporation remaining after making the distributions required by this Paragraph D to the holders of Preferred Stock. If, upon any such liquidation, dissolution or winding up of this Corporation, the assets distributable among the holders of the Preferred Stock shall be insufficient to permit the payment in full to such holders of the preferential amounts aforesaid,

then such assets shall be distributed among the holders of the Preferred Stock ratably in accordance with the preferential amount each is entitled to receive.

E. This Corporation, at the option of the Board of Directors, may redeem each series of Preferred Stock as a whole or in part, at such price or prices not less than the par value thereof, at such time or times, in such manner and upon such other terms and conditions as may be fixed and determined by the Board of Directors by resolution at the time such series is established. Notice of each intended redemption shall be given by publication at least once in each of two successive calendar weeks, in each case on any day of the week, in one newspaper customarily published on each business day, printed in the English language, and published in and of general circulation in the Borough of Manhattan in the City of New York in the State of New York, the first such publication to be made not less than thirty (30) days nor more than sixty (60) days prior to the date fixed for such redemption. A similar notice shall be mailed by this Corporation, postage prepaid, not less than thirty (30) days nor more than sixty (60) days prior to the date fixed for such redemption to the holders of record of the shares to be redeemed, addressed to each such shareholder at his address as the same appears upon the stock transfer books of this Corporation, but failure to mail such notice or any defect therein or in the mailing thereof shall not affect the validity of the proceedings for the redemption of any shares of Preferred Stock to be redeemed, and the mailing of such notice shall not be a condition of such redemption. In case of redemption of only a part of the outstanding shares of any series of Preferred Stock, the shares to be redeemed shall be selected pro rata or by lot or otherwise as the Board of Directors shall determine. On and after the date of redemption stated in such notice, each holder of shares of Preferred Stock called for redemption shall surrender his certificate for such shares to this Corporation at any place designated in such notice and shall thereupon be entitled to receive payment of the redemption price. In case less than all the shares represented by such surrendered certificate are redeemed, a new certificate shall be issued representing the non-redeemed shares. If the aforesaid notice of redemption shall have been duly published and if on or before the redemption date specified in such notice the funds necessary for such redemption shall have been deposited in trust for such purpose with a bank or trust company having a capital and surplus aggregating at least Ten Million Dollars (\$10,000,000), then, from and after the date of redemption so designated, notwithstanding that any certificate of Preferred Stock so called for redemption shall not have been surrendered for cancellation, the shares represented thereby so called for redemption shall no longer be deemed outstanding, dividends on such shares so called for redemption shall cease to accrue, and the holder thereof shall have no voting power in respect of such shares, and all rights with respect to the shares so called for redemption shall forthwith after such redemption date cease and determine, except only the right of the holder to receive the redemption price thereof, but without interest thereon; provided, however, that this Corporation may, at the option of the Board of Directors, by making the funds deposited as aforesaid immediately available to the holders of the shares so called for redemption (but at the full redemption price) terminate all rights of the holders of such shares on any date prior to the redemption date on or after the date on which the required deposit is made. To the extent that this Paragraph E does not otherwise provide, the Board of Directors is hereby expressly vested with full power and authority by resolution to fix and determine the price or prices (not less than the par value thereof) at which any series of Preferred Stock may be redeemed and the terms and conditions on which any series of the Preferred Stock may be redeemed from time to time and to fix and determine variations in any or all such respects as between series. Any shares of Preferred Stock redeemed by this Corporation may be reissued from time to time pursuant to appropriate resolution or resolutions of the Board of Directors of this Corporation, except shares of any series of Preferred Stock the resolution creating which shall have provided against such reissuance.

F. The Preferred Stock shall be preferred over the shares of stock of all other classes as to dividends and the holders of record of each series of Preferred Stock shall be entitled to receive, and this Corporation shall be required to pay when and as declared by the Board of Directors, out of any assets or funds of this Corporation available for the payment of

dividends in accordance with law, dividends payable in respect of each such series quarterly on the first day of January, April, July and October in each year. Dividends on the Preferred Stock shall be cumulative from the first day of the quarterly dividend period in which issued whether or not earned or declared, but arrears in the payment thereof shall not bear interest. In the payment of dividends on the Preferred Stock, no series shall be preferred over any other series. No dividend on any outstanding series shall be declared or set apart for payment in full or in part for any quarterly dividend period unless the dividends on all other outstanding series shall have been or shall then be paid or declared and set apart for payment in as great a percentage of the applicable dividend rate per share or in full, as the case may be, for all prior quarterly dividend periods and for such quarterly dividend period. So long as any of the Preferred Stock shall be outstanding, this Corporation shall not pay or declare any dividend or make any distribution on or purchase or redeem any shares of any class of stock ranking junior to the Preferred Stock or pay any monies into or make any monies available for a sinking fund or retirement fund for the purchase or redemption of shares of any class of stock ranking junior to the Preferred Stock unless

(1) all dividends on the Preferred Stock of all series at the time outstanding for all past quarterly dividend periods and for the current quarterly dividend period shall have been paid or shall have been declared and a sum sufficient for the payment thereof shall have been set apart so as to be and continue to be available for the payment thereof; and

(2) all amounts, if any, theretofore required to be set apart as and for all sinking funds for the Preferred Stock of all series then outstanding shall have been set aside so as to be and continue to be available for the purposes of or applied as provided or permitted by the provisions for such sinking funds.

G. Except with the consent of the holders of at least two-thirds ( $\frac{2}{3}$ ) of the Preferred Stock at the time outstanding, this Corporation may not at any time pay any dividend on any stock ranking junior to the Preferred Stock or make any distribution on any such stock, or redeem or purchase any shares of such stock for cash or property or in exchange for bonds or notes, if upon completion of such transaction

(1) the aggregate disbursements in respect of all such dividends, distributions, redemptions and purchases subsequent to the date of the issuance of the initial issue of Preferred Stock,

plus (2) one-third ( $\frac{1}{3}$ ) of the excess, if any, above Fifty-five Million Dollars (\$55,000,000) of the aggregate outstanding amount (as shown by a consolidated balance sheet of this Corporation and its consolidated subsidiaries) of funded debt and stocks of this Corporation and its consolidated subsidiaries, other than stocks of this Corporation ranking junior to the Preferred Stock,

will constitute a greater total than

(a) the consolidated net income of this Corporation and its consolidated subsidiaries earned subsequent to the date of the issuance of the initial issue of Preferred Stock, after deduction of such part thereof, if any, as may have been applicable to stocks of consolidated subsidiaries not owned by this Corporation or other consolidated subsidiaries and also after deduction of all dividends paid or accrued subsequent to said date on the Preferred Stock,

plus (b) the proceeds in cash or in other assets, taken at their fair value to this Corporation, derived from the sale or exchange, subsequent to said date, of shares of this Corporation's stock ranking junior to the Preferred Stock or of obligations converted after issuance into shares of such stock, and

plus (c) Two Million Five Hundred Thousand Dollars (\$2,500,000), if the transaction in question is the payment of a dividend.

Notwithstanding the foregoing, this Corporation may at any time retire any of its shares of its stock ranking junior to the Preferred Stock with the proceeds of, or by means of, other shares of its stock ranking junior to the Preferred Stock.

The terms "dividend" and "dividends", "distribution" and "distributions", as used in this Paragraph G, shall not include any dividends or distributions paid or made in shares of stock of this Corporation ranking junior to the Preferred Stock.

This Corporation may not at any time sell or issue any shares of its stock to any of its subsidiaries or permit any of its subsidiaries to purchase any shares of its stock.

II. Except with the consent of the holders of at least two-thirds ( $\frac{2}{3}$ ) of the Preferred Stock at the time outstanding, this Corporation may not take, or permit any consolidated subsidiary to take, any action which will result in an increase (from the standpoint of the consolidated balance sheet of this Corporation and its consolidated subsidiaries) in the aggregate outstanding amount of securities evidencing funded debt of this Corporation and its consolidated subsidiaries and preferred stocks of its consolidated subsidiaries, unless upon consummation of such increase such amount will not exceed Forty Million Dollars (\$40,000,000), or unless, if the same shall exceed Forty Million Dollars (\$40,000,000), two-thirds ( $\frac{2}{3}$ ) of the excess thereof over Forty Million Dollars (\$40,000,000) will not exceed

- (1) the proceeds in cash or in other assets, taken at their fair value to this Corporation, derived from the sale or exchange, subsequent to the date of the issuance of the initial issue of Preferred Stock, of shares of this Corporation's stock or of obligations converted after issuance into shares of this Corporation's stock, minus all disbursements of assets or obligations of this Corporation made by this Corporation subsequent to said date in the purchase or redemption of shares of its stock,

plus (2) the consolidated net income of this Corporation and its consolidated subsidiaries earned subsequent to said date, after deduction of such part thereof, if any, as may have been applicable to stocks of consolidated subsidiaries not owned by this Corporation or other consolidated subsidiaries and also after deduction of all dividends paid and distributions made to stockholders of this Corporation subsequent to said date otherwise than in shares of stock of this Corporation.

I. Except with the consent of the holders of at least two-thirds ( $\frac{2}{3}$ ) of the Preferred Stock at the time outstanding, this Corporation may not issue or dispose of any shares of the Preferred Stock unless after the issuance or disposal thereof the aggregate outstanding amount (as shown by a consolidated balance sheet of this Corporation and its consolidated subsidiaries) of stocks and funded debt of this Corporation and its consolidated subsidiaries, other than stocks of this Corporation ranking junior to the Preferred Stock, will not exceed Fifty-five Million Dollars (\$55,000,000), or unless, if the same shall exceed Fifty-five Million Dollars (\$55,000,000), one-third ( $\frac{1}{3}$ ) of the excess thereof over Fifty-five Million Dollars (\$55,000,000) will not be greater than

- (1) the proceeds in cash or other assets, taken at their fair value to this Corporation, derived from the sale or exchange, subsequent to the date of the issuance of the initial issue of Preferred Stock, of shares of this Corporation's stock ranking junior to the Preferred Stock or of obligations converted after issuance into shares of such stock, minus all disbursements of assets or obligations of this Corporation made by this Corporation subsequent to said date in the purchase or redemption of shares of its stock ranking junior to the Preferred Stock,

plus (2) the consolidated net income of this Corporation and its consolidated subsidiaries earned subsequent to said date, after deduction of such part thereof, if any, as may have been applicable to stocks of consolidated subsidiaries not owned by this Corporation or other consolidated subsidiaries and also after deduction of all dividends paid and distributions made subsequent to said date on stocks of this Corporation otherwise than in shares of stock of this Corporation.

J. Notwithstanding any other provision contained in this Article Four, this Corporation

- (1) may with the consent of the holders of at least a majority of the Preferred Stock then outstanding, but may not without such consent,
  - (a) increase the authorized amount of Preferred Stock above three hundred thousand (300,000) shares; or
  - (b) authorize stock ranking equally with the Preferred Stock; or
- (2) may with the consent of the holders of at least two-thirds ( $\frac{2}{3}$ ) of the Preferred Stock then outstanding, but may not without such consent, authorize stock ranking prior to the Preferred Stock.

No adverse or prejudicial change in the provisions of the Preferred Stock may at any time be made without the consent of the holders of at least two-thirds ( $\frac{2}{3}$ ) of the Preferred Stock then outstanding, or if all of the Preferred Stock shall not be affected by any such change or changes, then without the consent of the holders of at least two-thirds ( $\frac{2}{3}$ ) of the then outstanding Preferred Stock of the one or more series thereby affected.

K. Except with the consent of the holders of at least two-thirds ( $\frac{2}{3}$ ) of the Preferred Stock then outstanding, this Corporation may not sell all, or substantially all, of its assets or merge or consolidate with another corporation or joint-stock association; provided, however, that this restriction shall not apply to or operate to prevent any such sale, merger or consolidation, if at least thirty (30) days prior thereto this Corporation shall have given notice thereof to the holders of the Preferred Stock and immediately prior to the consummation thereof shall have purchased at the then applicable redemption price or prices, including any dividends accrued to the date of purchase, all Preferred Stock which shall have been tendered by the holders thereof for purchase at such price or prices; and provided further, that said restriction shall not apply to or operate to prevent any such merger or consolidation if

- (1) none of the rights or preferences of the Preferred Stock will be adversely affected thereby,
- (2) each holder of Preferred Stock will receive the same number of shares, with the same rights and preferences, of the surviving or resulting company as he held of the Preferred Stock,
- (3) the surviving or resulting company will have authorized or outstanding no class or series of stock, ranking prior to or equally with such stock received by the holders of the Preferred Stock, which does not correspond in its rights and preferences and in authorized amount to a class or series of stock which this Corporation had authorized immediately prior to the merger or consolidation, and
- (4) the surviving or resulting company, if it wishes to do so, will be able immediately, without violating the provisions relating to the preferred stock of such company which correspond to Paragraphs G, H, or I of this Article Four,
  - (a) to pay a dividend on stock ranking junior to the stock received by the holders of the Preferred Stock,
  - (b) to cause an increase to be made in the aggregate outstanding amount (as shown by a consolidated balance sheet of such company and its consolidated subsidiaries) of securities evidencing funded debt of such company and its consolidated subsidiaries and preferred stocks of its consolidated subsidiaries, and
  - (c) to issue or dispose of shares of preferred stock of such company ranking equally with the stock received by the holders of the Preferred Stock.

Any vote of holders of the Preferred Stock required under this Paragraph K for any action shall be sufficient authorization so far as the Preferred Stock of any series is concerned for

such action and when any such action is taken, holders of Preferred Stock of any series dissenting from such action shall not have any right to the payment of their shares by reason of such action.

1. For the purposes of this Article Four, the term "subsidiary" shall mean a corporation or joint-stock association of which this Corporation, directly or through other subsidiaries, owns at least a majority of the stock which is unlimited as to dividends and also a sufficient amount of stock to entitle it, under the voting rights then possessed by such stock, to elect a majority of such corporation's or joint-stock association's directors or trustees at an election at which all stockholders entitled to vote for the election of directors or trustees are present in person or by proxy; provided, however, that no corporation or joint-stock association of which this Corporation at any time during the year 1911 shall own more than one-half (1/2) of the stock unlimited as to dividends and also sufficient stock to entitle it, at any such election, to elect a majority of such corporation's or joint-stock association's directors or trustees if it were not for the existence of dividend arrears on preferred stock of such corporation or joint-stock association, shall be deemed to become a subsidiary merely because of a change in the voting rights of its respective classes of stock, resulting from payment of dividend arrears on preferred stock, which shall have the effect of vesting sufficient voting power in the stocks of such corporation or joint-stock association owned by this Corporation, directly or through subsidiaries, to entitle this Corporation, at any such election, to elect a majority of such corporation's or joint-stock association's directors or trustees. Each subsidiary shall be deemed to be a consolidated subsidiary unless this Corporation in its discretion, as expressed by a resolution of its Board of Directors, shall determine to exclude the same from such classification, provided, however, that this Corporation may not exclude any subsidiary from such classification

(1) if immediately after the exclusion thereof, total investments in and advances to all non-consolidated subsidiaries, as shown by a consolidated balance sheet of this Corporation and its consolidated subsidiaries, shall exceed five per cent (5%) of the total tangible assets, less applicable reserves, shown on such balance sheet, or

(2) if this Corporation or any consolidated subsidiary shall have guaranteed any outstanding indebtedness or securities of such subsidiary.

A subsidiary so excluded shall remain excluded unless and until this Corporation, by a resolution of its Board of Directors, shall rescind such exclusion.

This Corporation may not make any additional investment in or advances to an excluded subsidiary if immediately after the same shall have been made total investments in and advances to all non-consolidated subsidiaries, as shown by a consolidated balance sheet of this Corporation and its consolidated subsidiaries, shall exceed five per cent (5%) of the total tangible assets, less applicable reserves, shown on such balance sheet.

Tangible assets shall include all assets except good will, patents, trade-marks and unamortized debt discount and expense, as determined in accordance with sound accounting practice.

In computing the amount of the investments in and advances to non-consolidated subsidiaries, both as a separate total and as part of total tangible assets, such investments and advances shall be taken at cost, except that any such investments and advances which shall have been owned at the date of the issuance of the initial issue of Preferred Stock shall be taken at the carrying value thereof on the books of this Corporation at such date.

The term "advances" shall not include accounts receivable arising in the ordinary course of business.

Earnings of an excluded subsidiary during the period of its exclusion shall be included in computing consolidated net income of this Corporation and its consolidated subsidiaries for such period only to the extent of the interest and dividends (exclusive of dividends paid in Capital Stock of such subsidiary) received from such subsidiary.

In computing net income earned subsequent to the date of the issuance of the initial issue of Preferred Stock there shall be taken into account all debits or credits to earned surplus

which represent corrections of or offsets or additions to items included or deducted in arriving at net income for any period subsequent to said date, but there shall not be taken into account

- (a) any other debits or credits to surplus,
- (b) any additional taxes or interest thereon which may be determined to be payable, or any tax refunds and interest thereon which may be received, in respect of periods prior to said date,
- (c) any profits or losses arising from the sale or adjustment of carrying values of investment securities or fixed assets (other than from retirements of depreciable property in the ordinary course of business),
- (d) any profits or losses arising from adjustments in reserves, other than adjustments made for the purpose of correcting or offsetting over-accruals or under-accruals made since said date, or
- (e) any premiums paid to redeem any securities or any unamortized discount or expense or premiums existing in respect of any securities at the time of the redemption thereof.

In computing outstanding amounts of securities, funded debt shall be taken at the principal amount thereof, preferred stocks shall be taken at the par value thereof, or, if the same shall be without par value, then at the amount payable thereon in the event of involuntary liquidation, and common stocks of consolidated subsidiaries shall be taken at the book value thereof as shown by the accounts of such subsidiaries.

The term "funded debt" shall mean indebtedness maturing twelve (12) months or more after the date of its issue.

In the event that another corporation or corporations or joint-stock association or associations shall be merged into this Corporation or this Corporation shall be merged into or consolidated with another corporation or joint-stock association, there shall not be included in any subsequent computation of net income earned, or dividends paid or distributions made, or proceeds derived from the sale or exchange of securities, subsequent to the date of the issuance of the initial issue of Preferred Stock, any net income earned, or any dividends paid or distributions made, or any proceeds derived from the sale or exchange of securities, prior to the consummation of such merger or consolidation, by the corporation or corporations or joint-stock association or associations merged into this Corporation or into which this Corporation shall be merged or with which it shall be consolidated, or by subsidiaries of such corporation or corporations or joint-stock association or associations; except that if such corporation or corporations or joint-stock association or associations shall have been subsidiaries of this Corporation immediately prior to such merger or consolidation, the earnings thereof prior to such merger or consolidation shall be included in net income to the extent that the same would have been so included if such merger or consolidation had not taken place.

#### ARTICLE FIVE:

The term for which this Corporation is to exist is perpetual.

#### ARTICLE SIX:

The private property of the stockholders of this Corporation shall not be subject to the payment of the corporate debts to any extent whatever.

#### ARTICLE SEVEN:

1. The business of this Corporation shall be managed by its Board of Directors, except as may otherwise be required by law. The Board of Directors may, by resolution or resolutions passed by a majority of the whole Board, designate one or more committees, each com-

mittee to consist of three or more directors which, to the extent provided in said resolution or resolutions or in the By-Laws of this Corporation, shall have and may exercise the powers of the Board of Directors in the management of the business and affairs of this Corporation and may have the power to authorize the seal of this Corporation to be affixed to all papers which may require it. Such committee or committees shall have such name or names as may be stated in the By-Laws of this Corporation or as may be determined from time to time by resolution adopted by the Board of Directors.

2. The number of directors of this Corporation, which shall never be less than three (3), shall be fixed from time to time by the By-Laws and may be altered from time to time by amendment of the By-Laws. In case of any increase in the number of directors, the additional directors shall be elected as may be provided in the By-Laws.

3. The directors of this Corporation may, by a vote of the stockholders, be divided into one, two or three classes as provided by the laws of the State of Delaware.

4. This Corporation may have such office or offices outside the State of Delaware as the By-Laws may provide or permit.

5. No director of this Corporation need be a stockholder of this Corporation or a resident of the State of Delaware.

6. The Board of Directors may make By-Laws and from time to time may alter, amend or repeal any By-Laws, but any By-Laws made by the Board of Directors may be altered, amended or repealed by the stockholders at any annual meeting or at any special meeting, provided, in the case of any special meeting, that notice of such proposed alteration, amendment or repeal is included in the notice of such meeting, and the By-Laws may contain provisions prohibiting the amendment of particular provisions thereof without the consent of the holders of any specified percentage of the shares of any class of stock of this Corporation.

7. This Corporation, without action by its stockholders, shall have the power to issue any shares of stock authorized by the Certificate of Incorporation for such consideration as may be fixed from time to time by the Board of Directors. This Corporation, without action by its stockholders, shall have power to create and issue, whether or not in connection with the issue and sale of any shares of stock or other securities of this Corporation, rights or options entitling the holders thereof to purchase from this Corporation any shares of its capital stock, such rights or options to be evidenced by or in such instrument or instruments as shall be approved by the Board of Directors. The terms upon which, the time or times, which may be limited or unlimited in duration, at or within which, and the price or prices at which any such shares may be purchased from this Corporation upon the exercise of any such right or option shall be such as shall be fixed and stated in a resolution or resolutions adopted by the Board of Directors providing for the creation and issue of such rights or options, and, in every case, set forth or incorporated by reference in the instrument or instruments evidencing such rights or options; provided, however, that the consideration therefor shall be determined in the manner hereinabove provided in this Article Seven for the fixing of the consideration for the issue of such stock.

8. This Corporation may, at any meeting of its Board of Directors, sell, lease or exchange all or substantially all of its property and assets, including its good will and its corporate franchises, upon such terms and conditions and for such consideration, which may be in whole or in part shares of stock in, and/or other securities of, any other corporation or corporations and any joint-stock association or associations, as its Board of Directors shall deem expedient and for the best interests of this Corporation, when and as authorized by the affirmative vote of the holders of a majority of the Common Stock issued and outstanding given at a meeting duly called for that purpose, or when authorized by the written consent of the holders of a majority of the Common Stock issued and outstanding, and upon compliance with Paragraph K of Article Four hereof. This Corporation may sell, lease or exchange any of its property and assets, less than substantially all, upon such terms and conditions and for such



consideration, which may be in whole or in part shares of stock in, and, or securities of, any other corporation or corporations and any joint-stock association or associations, as the Board of Directors shall deem expedient and for the best interests of this Corporation without any action by the stockholders of this Corporation.

9. The Board of Directors shall have power from time to time to set apart out of any funds of this Corporation available therefor a reserve for any proper purpose and to abolish such reserve and to fix and determine and to vary the amount of the working capital of this Corporation and to direct and determine the use and disposition of the working capital and of any capital surplus or net profits over and above the stated capital.

10. The stockholders and the Board of Directors shall have power to hold their meetings and to keep the books, documents and papers of this Corporation outside the State of Delaware at such place or places as from time to time may be provided by the By-Laws, except as otherwise required by the laws of the State of Delaware.

11. The Board of Directors from time to time shall determine whether and to what extent and at what times and places and under what conditions and regulations the accounts and books of this Corporation or any of them shall be open to the inspection of the stockholders, and no stockholder shall have any right to inspect any account, book, document or record of this Corporation except as conferred by law or as authorized by a resolution of the Board of Directors.

12. All elections of directors by stockholders shall be by ballot. Directors elected to fill vacancies may be elected in the manner provided for in the By-Laws.

13. This Corporation shall be entitled to treat the person in whose name any share of stock is registered as the owner thereof for all purposes and shall not be bound to recognize any equitable or other claim to or interest in such share on the part of any other person whether or not this Corporation shall have notice thereof except as is expressly provided otherwise by the laws of the State of Delaware.

14. Each stockholder shall have one vote for each share of stock having voting power registered in his name on the books of this Corporation; except that at all elections of directors each stockholder shall be entitled to as many votes as shall equal the number of his shares of stock of each class entitled to vote multiplied by the number of directors to be elected by that class, and he may cast all of such votes with respect to each class for a single nominee of such class or he may distribute them among any two or more of the nominees of such class as he may see fit. The nominees of each class of stock entitled to vote receiving the highest number of votes of the stockholders entitled to vote for such nominees, up to the number of directors to be elected by each class of stock entitled to vote, shall be elected.

15. This Corporation shall have power to cooperate with other corporations and with natural persons in the creation and maintenance of community funds or of charitable, philanthropic, benevolent or patriotic instrumentalities conducive to public welfare, and the Board of Directors may appropriate and expend for those purposes such sum or sums as they deem expedient and as in their judgment will benefit or contribute to the protection of the corporate interests.

16. This Corporation shall indemnify any and all of its directors or officers or former directors or officers or any person who may have served at its request as a director or officer of another corporation in which it owns shares of capital stock or of which it is a creditor against expenses actually and necessarily incurred by them in connection with the defense of any action, suit or proceeding in which they, or any of them, are made parties, or a party, by reason of being or having been directors or officers or a director or officer of this Corporation, or of such other corporation, except in relation to matters as to which any such director or officer or former director or officer or person shall be adjudged in such action, suit or proceeding to be liable for negligence or misconduct in the performance of duty. Such indem-

nification shall not be deemed exclusive of any other rights to which those indemnified may be entitled, under any by-law, agreement, vote of stockholders, or otherwise.

17. Special meetings of the Board of Directors may be called and held without the purposes of such meeting being stated in the notice thereof.

The foregoing enumeration of powers conferred on this Corporation and on its Board of Directors is intended to be in furtherance of and not in any way a limitation on the powers conferred by law.

#### ARTICLE EIGHT:

No arrangement with this Corporation in which any of the directors shall have an interest shall be void or voidable on account of such interest, nor shall any director so interested be liable to account, if such director shall disclose (or the directors shall have knowledge of, if authorization or ratification is to be by them) the nature of his interest, though not necessarily the details or extent thereof, and if such arrangement shall be authorized and ratified (a) at a meeting of the directors by vote, resolution or consent of a disinterested majority of the directors, or (b) by a written vote or resolution signed by the holders of a majority of the shares of stock, entitled to vote generally, without a meeting, or (c) by a majority vote of the stockholders, entitled to vote generally.

No arrangement between this Corporation and any other company in which any of the directors shall have an interest solely by reason of being officers, minority stockholders or creditors of such company (or solely by reason of being directors thereof where such other company is a subsidiary of or otherwise affiliated or allied with this Corporation or owns a majority of the shares of this Corporation or where such arrangement is made by officers or agents of this Corporation in the ordinary performance of their duties and without the actual participation of such directors) shall be void or voidable on account of such interest, nor shall any such director be liable to account because of such interest, nor need any such interest be disclosed, and such director may vote in respect of such arrangement. Except in such instances, no director shall vote or act in respect of any arrangement with this Corporation in which he shall have an interest, and if he does so vote or act, his vote or action shall not be counted but shall not operate to render the arrangement void or voidable.

The disclosure required by this Article Eight shall be sufficient if made (a) to the meeting of the directors or stockholders authorizing or ratifying the particular arrangement in question, or (b) by a general notice presented to a meeting of the directors or stockholders and filed with the Secretary stating that such director is a director of a specified company, and is to be regarded as interested in all arrangements with that company, after which it shall not be necessary for such director to give a special notice in regard to any particular arrangement with that company, or in regard to the nature of his interest in such particular arrangement.

As used in this Article Eight, unless the context otherwise requires, "arrangement" shall include any contract, agreement, dealing or other transaction; "director" shall include any committee member, officer or agent of this Corporation; and "company" shall include corporation, association, partnership, trust and any form of business organization.

The provisions of this Article Eight shall not make any transaction void or voidable which otherwise would be valid, nor give rise to any accounting with respect to any such transaction. None of the provisions of this Article Eight shall, however, be construed to protect against bad faith.

#### ARTICLE NINE:

Whenever a compromise or arrangement is proposed between this Corporation and its creditors or any class of them, and/or between this Corporation and its stockholders or any class of them, any court of equitable jurisdiction within the State of Delaware may, on the application in a summary way of this Corporation or of any creditor or stockholder thereof, or on the application of any receiver or receivers appointed for this Corporation under the provisions of Section 3863 of the Revised Code of 1915 of said State, or on the application of trustees in dissolution or of any receiver or receivers appointed for this Corporation under

the provisions of Section 43 of the General Corporation Law of the State of Delaware, order a meeting of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this Corporation, as the case may be, to be summoned in such manner as the said court directs. If a majority in number representing three-fourths (¾) in value of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this Corporation, as the case may be, agree to any compromise or arrangement and to any reorganization of this Corporation as consequence of such compromise or arrangement, the said compromise or arrangement and the said reorganization shall, if sanctioned by the court to which the said application has been made, be binding on all the creditors or class of creditors, and/or on all the stockholders or class of stockholders, of this Corporation, as the case may be, and also on this Corporation.

#### ARTICLE TEN:

This Corporation shall have the right to amend, alter, change or repeal any provision contained in this Agreement of Merger which could be contained in the certificate of incorporation of a corporation formed under the laws of the State of Delaware in the manner now or hereafter prescribed by statute, but subject to the provisions of this Agreement of Merger, and all rights conferred upon the stockholders by this Agreement of Merger are granted subject to this reservation.

#### SECTION III.

The By-Laws of KOPPERS COMPANY, INC., shall remain and be the By-Laws of this Corporation until the same shall be amended, altered or repealed according to the provisions thereof.

The number of directors of this Corporation shall be fixed by the By-Laws of this Corporation and may be altered from time to time as may be provided therein. The number, names and places of residence of the first Board of Directors of this Corporation, who shall hold office from and after the effective date of this Agreement of Merger until the first annual meeting of the stockholders of this Corporation thereafter and until their respective successors be duly elected and qualified, are as follows:

<i>Name</i>	<i>Residence</i>
Stanley N. Brown	1226 Murrayhill Avenue, Pittsburgh, Pennsylvania
John N. Marshall	R.D. No. 3, Bethlehem, Pennsylvania
R. H. McClintic	1130 Beechwood Boulevard, Pittsburgh, Pennsylvania
R. K. Mellon	Huntland Downs, Ligonier, Pennsylvania
L. N. Murray	1312 Inverness Avenue, Pittsburgh, Pennsylvania
D. D. Shepard	2915 O Street, N.W., Washington, D. C.
Clarence Stankey	5429 Dunmoyle Street, Pittsburgh, Pennsylvania
J. T. Tierney	Schenley Apartments, Pittsburgh, Pennsylvania
J. P. Williams, Jr.	621 South Linden Avenue, Pittsburgh, Pennsylvania

The first annual meeting of stockholders of this Corporation after the effective date of this Agreement of Merger shall be the annual meeting provided by the By-Laws for the year 1945.

Unless and until the Board of Directors of this Corporation shall otherwise determine, the following officers of KOPPERS COMPANY, INC., shall be the officers of this Corporation:

<i>Office</i>	<i>Name</i>	<i>Residence</i>
Chairman of the Board	J. T. Tierney	Schenley Apartments, Pittsburgh, Pennsylvania
President	J. P. Williams, Jr.	621 South Linden Avenue, Pittsburgh, Pennsylvania
Vice President	Joseph Becker	South Drive, Fox Chapel Manor, Fox Chapel, Pennsylvania
Vice President	Stanley N. Brown	1226 Murrayhill Avenue, Pittsburgh, Pennsylvania
Vice President	John F. Byrne	4943 Lindell Boulevard, St. Louis, Missouri
Vice President	Fred Denig	Royal Yorke Apartments, Pittsburgh, Pennsylvania
Vice President	J. N. Forker	5833 Howe Street, Pittsburgh, Pennsylvania
Vice President	M. T. Herreld	2239 Gordon Avenue, St. Paul, Minnesota
Vice President	W. Reed Morris	670 Haxtun Avenue, Orange, New Jersey
Vice President	A. W. Morton	Box 200, Ruxton, Maryland
Vice President	W. F. Munnikhuyzen	1450 Bennington Avenue, Pittsburgh, Pennsylvania
Vice President	W. F. Perkins	114 St. Dunstan's Road, Baltimore, Maryland
Vice President	D. M. Rugg	608 Maple Lane, Edgeworth, Pennsylvania
Treasurer	E. A. Berry	711 Valley View Road, Virginia Manor, Mt. Lebanon, Pennsylvania
Secretary	E. S. Ruffin, Jr.	5050 Warwick Terrace, Pittsburgh, Pennsylvania
Assistant Secretary	C. M. Crick	613 Arlen Road, Mt. Lebanon, Pennsylvania
Assistant Secretary	John M. Crimmins	33 Sunny Hill Drive, Mt. Lebanon, Pennsylvania
Assistant Secretary	T. H. Hamilton	Fox Chapel Road, Fox Chapel, Pennsylvania
Assistant Treasurer	G. H. Curran	1070 Arbor Drive, Mt. Lebanon, Pennsylvania
Assistant Treasurer	F. M. Dapper	R. D. 1, Ohio View, Industry, Pennsylvania
Assistant Treasurer	L. S. Graham	283 Magnolia Place, Mt. Lebanon, Pennsylvania
Assistant Treasurer	E. B. Shuck	3143 Ashlyn Street, Pittsburgh, Pennsylvania
Assistant Secretary and Assistant Treasurer	Geo. W. Brooks	40 S. Munn Avenue, East Orange, New Jersey
Assistant Secretary and Assistant Treasurer	W. G. Hunt	2559 Wenzel Avenue, Pittsburgh, Pennsylvania
Assistant Secretary and Assistant Treasurer	L. J. Love	195 Prospect Street, East Orange, New Jersey
Assistant Secretary and Assistant Treasurer	John E. Tellman	1309 Marble Hall Road, Baltimore, Maryland
Assistant Secretary and Assistant Treasurer	George H. Persch	72 Sheridan Road, Wellesley Hills, Massachusetts
Assistant Secretary and Assistant Treasurer	Roy D. Pippen	Linthicum Heights, Maryland
Assistant Secretary and Assistant Treasurer	C. J. Robb	131 Riverside Drive, Madison, New Jersey
Assistant Secretary and Assistant Treasurer	Richard J. Wheeler	1266 Goodrich Avenue, St. Paul, Minnesota

Said officers shall have all the powers of officers duly chosen by the Board of Directors, and they shall hold office until their respective successors be duly chosen and qualified.

The first regular meeting of the Board of Directors of this Corporation shall be held as soon as practicable after the effective date of this Agreement of Merger and may be called in the manner provided in the By-Laws for the calling of Special Meetings of the Board of Directors and may be held at the time and place specified in the notice of the meeting.

#### SECTION IV.

The manner of converting the shares of each of the constituent corporations and joint-stock associations into shares or other securities of this Corporation shall be as follows:

1. Each Common Share of KOPPERS UNITED COMPANY now outstanding shall be converted into nineteen one-hundredths (19/100) of a share of Common Stock of this Corporation;
2. Each Preferred Share of KOPPERS UNITED COMPANY now outstanding shall be converted into five and two-tenths (5.2) shares of Common Stock of this Corporation;
3. Each share of Common Stock of KOPPERS COMPANY now issued and outstanding, all of which are owned by KOPPERS UNITED COMPANY, each share of Common Stock of THE KOPPERS ERECTING CORPORATION now issued and outstanding, all of which are owned by KOPPERS COMPANY (as well as the five hundred (500) shares of Common Stock held in the treasury of THE KOPPERS ERECTING CORPORATION), and each Common Share of FUEL INVESTMENT ASSOCIATES now issued and outstanding, all of which are owned by KOPPERS UNITED COMPANY, and each share of Preferred Stock of FUEL INVESTMENT ASSOCIATES now issued and outstanding, all of which are owned by KOPPERS COMPANY, shall be extinguished and cancelled; and
4. Each share of Preferred Stock of KOPPERS COMPANY now outstanding shall be converted into a negotiable promissory note of this Corporation, payable to bearer, dated October 1, 1911, and payable December 31, 1914, in the principal amount of \$110.00 with interest thereon of \$1.50 for each \$110.00 of principal, payable at maturity.

#### SECTION V.

If at any time KOPPERS COMPANY, INC., shall consider or be advised that any further assignments or assurances are necessary or desirable to vest in KOPPERS COMPANY, INC., according to the terms of this Agreement of Merger, the title to any property or rights of KOPPERS COMPANY, THE KOPPERS ERECTING CORPORATION, KOPPERS UNITED COMPANY or FUEL INVESTMENT ASSOCIATES, the proper officers and directors or trustees, as the case may be, of said corporations and joint-stock associations shall and will execute and make all such proper assignments and assurances and do all things necessary or proper to vest title in such property or rights in KOPPERS COMPANY, INC., and otherwise to carry out the purposes of this Agreement of Merger.

KOPPERS COMPANY, INC., shall pay all expenses of carrying this Agreement of Merger into effect.

#### SECTION VI.

This Agreement of Merger shall have no force or effect unless and until the same has been duly adopted by the stockholders or shareholders of each of the parties hereto, and unless and until the same shall have been duly filed and recorded as hereinafter provided, but, if and when such stockholders and shareholders have duly adopted this Agreement of Merger, it shall become effective for all purposes upon its being filed in the Office of the Secretary of State of the State of Delaware, and upon a copy thereof, duly certified by the Secretary of State of the State of Delaware under the seal of his office, being recorded in the Office of the Recorder of New Castle County in the State of Delaware, and thereupon the separate existence of KOPPERS COMPANY, THE KOPPERS ERECTING CORPORATION, KOPPERS UNITED COMPANY and FUEL INVESTMENT ASSOCIATES shall cease and they shall be merged into KOPPERS COMPANY, INC., in accordance with the provisions of this Agreement of Merger, and KOPPERS COMPANY, INC., shall possess all the rights, privileges, powers and franchises as well of a public as of a private nature and shall be subject to all the restrictions, disabilities and duties of each of such corporations and joint-stock associations so merged and all and singular the rights, privileges, powers and franchises of each of said corporations and joint-stock associations and all property, real, personal and mixed, and all debts due to any of said constituent corporations and joint-stock associations on whatever account, as well

for stock subscriptions as all other things in action or belonging to each of such corporations or joint-stock associations, shall be vested in KOPPERS COMPANY, INC.; and all property, rights, privileges, powers and franchises and all and every other interest shall be thereunder as effectually the property of KOPPERS COMPANY, INC., as they were of the several and respective constituent corporations and joint-stock associations, and the title to any real estate vested by deed or otherwise under the laws of the State of Delaware or any other State or any foreign country in any of such constituent corporations or joint-stock associations shall not revert or be in any way impaired by reason of this Agreement of Merger; provided, however, that all rights of creditors and all liens upon any property of any of said constituent corporations or joint-stock associations shall be preserved unimpaired and all debts, liabilities and duties of the respective constituent corporations and joint-stock associations shall thenceforth attach to KOPPERS COMPANY, INC., and may be enforced against it to the same extent as if said debts, liabilities and duties had been incurred or contracted by it.

#### SECTION VII.

This Agreement of Merger shall be submitted for consideration to the stockholders of KOPPERS COMPANY at a special meeting of such stockholders to be held at the offices of KOPPERS COMPANY in the City of Pittsburgh, Pennsylvania, on the 3<sup>rd</sup> day of November, 1944, at 10:00 o'clock A. M. Eastern War Time; it shall be submitted for consideration to the shareholders of KOPPERS UNITED COMPANY at a special meeting of such shareholders to be held at the offices of KOPPERS UNITED COMPANY in the City of Boston, Massachusetts, on the 3<sup>rd</sup> day of November, 1944, at 10:00 o'clock A. M. Eastern War Time; it shall be submitted to the stockholders of KOPPERS COMPANY, INC., and THE KOPPERS ERECTING CORPORATION, for adoption pursuant to Section 81 of the General Corporation Law of the State of Delaware, by the unanimous written consent of all of the stockholders of said corporations; and it shall be submitted to the shareholders of FUEL INVESTMENT ASSOCIATES for adoption pursuant to the Declaration of Trust by which FUEL INVESTMENT ASSOCIATES was organized and is regulated, by the unanimous written consent of all of the shareholders of said joint-stock association.

#### SECTION VIII.

Reference is hereby made to the said Declaration of Trust establishing KOPPERS UNITED COMPANY, dated April 24, 1931, a copy of which as amended has been filed with the Commissioner of Corporations and Taxation of the Commonwealth of Massachusetts and at the principal office of the Company at 250 Stuart Street, Boston, Massachusetts. The name "KOPPERS UNITED COMPANY" refers to the trustees under said Declaration of Trust, as trustees but not personally, and no trustee, shareholder, officer or agent of KOPPERS UNITED COMPANY shall be held to any personal liability in connection with the affairs of the said Company, but the trust estate only is liable.

Reference is hereby made to said Declaration of Trust establishing FUEL INVESTMENT ASSOCIATES dated May 3, 1929, a copy of which has been filed with the Commissioner of Corporations and Taxation of the Commonwealth of Massachusetts and at the principal office of the Company of FUEL INVESTMENT ASSOCIATES at 250 Stuart Street, Boston, Massachusetts. The name "FUEL INVESTMENT ASSOCIATES" refers to the trustees under said Declaration of Trust, as trustees but not personally, and no trustee, shareholder, officer or agent of FUEL INVESTMENT ASSOCIATES shall be held to any personal liability in connection with the affairs of said Company, but the trust estate only is liable.

IN WITNESS WHEREOF, The parties to this Agreement of Merger, pursuant to authority duly given by their respective Boards of Directors or Trustees, have caused these presents to

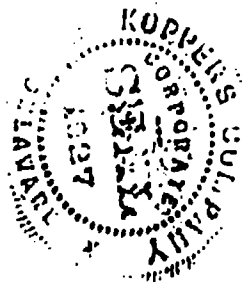
be executed by a majority of the directors or trustees of each party hereto, and their respective corporate or common seals to be hereto affixed.



Attest:     C. U. Brick      
Assistant Secretary

KOPPERS COMPANY, INC.

By     C. Stanley      
    J. P. Murray      
    W. N. Williams      
    Stanley N. Brown      
    J. Williams      
A majority  
of the Board of Directors



Attest:     C. U. Brick      
Assistant Secretary

KOPPERS COMPANY

By     J. P. Murray      
    Stanley N. Brown      
    J. Williams      
A majority  
of the Board of Directors



Attest:     E. Ruppert, Jr.      
Assistant Secretary

THE KOPPERS ERECTING CORPORATION

By     J. P. Murray      
    Stanley N. Brown      
    J. Williams      
A majority  
of the Board of Directors

KOPPERS UNITED COMPANY

By *E. H. Bird*  
*L. P. Smith*  
*E. H. Adams*  
*A. H. Ward*  
*Theron Batehelder*  
*C. Russell Wallon*  
*James S. Eastham*  
*E. H. Bird*  
*Stanley N. Brown*  
*J. W. Klein*

A majority of the Board of Trustees and also a majority of the Trustees who are residents of Massachusetts.

Attest:  
*E. H. Rappin, Jr.*  
 Assistant Secretary



Attest:  
*E. H. Rappin, Jr.*  
 Assistant Secretary

FUEL INVESTMENT ASSOCIATES

By *E. H. Bird*  
*E. H. Adams*  
*James S. Eastham*

A majority of the Board of Trustees and also a majority of the Trustees who are residents of Massachusetts.

I, *C. M. Crick*, Assistant Secretary of KOPPERS COMPANY, INC., a corporation organized and existing under the laws of the State of Delaware, hereby certify, as such Assistant Secretary and under the seal of the said corporation, that the Agreement of Merger to which this certificate is attached, after having been first duly signed on behalf of the said corporation by a majority of the directors thereof and having been signed by a majority of the directors of KOPPERS COMPANY and THE KOPPERS ERECTING CORPORATION, respectively, both corporations of the State of Delaware, and having been signed by a majority of the trustees of KOPPERS UNITED COMPANY and FUEL INVESTMENT ASSOCIATES, respectively, both joint-stock associations as defined by Section 59B of the General



Corporation Law of the State of Delaware, was duly adopted pursuant to Section 81 of the General Corporation Law of the State of Delaware, by the unanimous written consent of the stockholders holding one hundred (100) shares of the capital stock of the corporation, the same being all of the shares issued and outstanding, and that a signed copy of such consent is attached hereto and made a part of the Agreement of Merger.

Witness My hand and the seal of said KOPPERS COMPANY, INC., on this 8th day of November, 1944.

*C. M. Crick*  
Assistant Secretary

**UNANIMOUS CONSENT TO ADOPTION OF AGREEMENT OF MERGER  
BY THE STOCKHOLDERS OF KOPPERS COMPANY, INC.**

The subscriber, Donald P. Moyers, being the sole stockholder of KOPPERS COMPANY, INC., a corporation organized and existing under the laws of the State of Delaware, does hereby give his consent in writing to the adoption by said KOPPERS COMPANY, INC., of the Agreement of Merger between said KOPPERS COMPANY, INC., KOPPERS COMPANY and THE KOPPERS ERECTING CORPORATION, all corporations of the State of Delaware, and KOPPERS UNITED COMPANY and FUEL INVESTMENT ASSOCIATES, both joint-stock associations as defined by Section 59B of the General Corporation Law of the State of Delaware, to which this instrument of consent is attached.

IN WITNESS WHEREOF, The subscriber has hereunto set his hand and seal this 8th day of November, 1944.

*Donald P. Moyers*

WITNESSES

*John M. Greenman*  
*J. H. Hamilton*

I, *C. M. Crick*, Assistant Secretary of KOPPERS COMPANY, a corporation organized and existing under the laws of the State of Delaware, hereby certify, as such Assistant Secretary and under the seal of the said corporation, that the Agreement of Merger to which this certificate is attached, after having been first duly signed on behalf of the said corporation by a majority of the directors thereof and having been signed by a majority of the directors of KOPPERS COMPANY, INC., and THE KOPPERS ERECTING CORPORATION, respectively, both corporations of the State of Delaware, and having been signed by a majority of the trustees of KOPPERS UNITED COMPANY and FUEL INVESTMENT ASSOCIATES, both joint-stock associations as defined by Section 59B of the General Corporation Law of the State of Delaware, was duly submitted to the stockholders of said KOPPERS COMPANY at a special meeting of said stockholders called and held separately from the meeting of stockholders or shareholders of any other corporation or joint-stock association after at least twenty (20) days' notice by mail, and notice by publication as provided by Section 59 and Section 59B of the General Corporation Law of the State of Delaware, on the 8th day of November, 1944, for the purpose of considering and taking action upon the proposed Agreement of Merger; that one million two hundred thousand (1,200,000) shares of stock of said corporation were on said date issued and outstanding; that the holders of one million one hundred fifteen (1,000,115) shares voted by ballot in favor of the approval, and the holders of no shares voted by ballot against the approval of the proposed Agreement of Merger, the said affirmative vote representing at least two-thirds (2/3) of the total number of shares of the outstanding capital stock of said corporation, and that thereby the Agreement of Merger was at said meeting duly adopted as the act of the stockholders of said KOPPERS COMPANY and the duly adopted agreement of the said corporation.

Witness My hand and the seal of said KOPPERS COMPANY on this 8th day of November, 1944.

*C. E. Ruffin, Jr.*  
Assistant Secretary

I, *E. S. Ruffin, Jr.*, Assistant Secretary of THE KOPPERS ERECTING CORPORATION, a corporation organized and existing under the laws of the State of Delaware, hereby certify, as such Assistant Secretary and under the seal of the said corporation, that the Agreement of Merger to which this certificate is attached, after having been first duly signed on behalf of the said corporation by a majority of the directors thereof and having been signed by a majority of the directors of KOPPERS COMPANY, INC., and KOPPERS COMPANY, respectively, both corporations of the State of Delaware, and having been signed by a majority of the trustees of KOPPERS UNITED COMPANY and FUEL INVESTMENT ASSOCIATES, respectively, both joint-stock associations as defined by Section 59B of the General Corporation Law of the State of Delaware, was duly adopted pursuant to Section 81 of the General Corporation Law of the State of Delaware, by the unanimous written consent of the stockholders holding five hundred (500) shares of the capital stock of the corporation, the same being all of the shares issued and outstanding, and that a signed copy of such consent is attached hereto and made a part of the Agreement of Merger.

Witness My hand and the seal of said THE KOPPERS ERECTING CORPORATION on this 8th day of November, 1944.

*E. S. Ruffin, Jr.*  
Assistant Secretary

**UNANIMOUS CONSENT TO ADOPTION OF AGREEMENT OF MERGER  
BY THE STOCKHOLDERS OF THE KOPPERS ERECTING CORPORATION**

The subscriber, KOPPERS COMPANY, being the sole stockholder of THE KOPPERS ERECTING CORPORATION, a corporation organized and existing under the laws of the State of Delaware, does hereby give its consent in writing to the adoption by said THE KOPPERS ERECTING CORPORATION of the Agreement of Merger between said THE KOPPERS ERECTING CORPORATION, KOPPERS COMPANY, INC., and KOPPERS COMPANY, all corporations of the State of Delaware, and KOPPERS UNITED COMPANY and FUEL INVESTMENT ASSOCIATES, both joint-stock associations as defined by Section 59B of the General Corporation Law of the State of Delaware, to which the instrument of consent is attached.

IN WITNESS WHEREOF, KOPPERS COMPANY has caused this instrument to be signed and its corporate seal to be hereunto affixed by its proper officers thereunto duly authorized, this 8th day of November, 1944.

KOPPERS COMPANY

By *Stanley H. Brown*  
Vice President

Attest:

*C. E. Ruffin, Jr.*  
Assistant Secretary

I, *E. S. Ruffin, Jr.*, Assistant Secretary of KOPPERS UNITED COMPANY, a joint-stock association as defined by Section 59B of the General Corporation Law of the State of Delaware, hereby certify, as such Assistant Secretary and under the seal of the said joint-stock association, that the Agreement of Merger to which this certificate is attached.

after having been first duly signed on behalf of said joint-stock association by a majority of the trustees thereof and having been signed by a majority of the directors of KOPPERS COMPANY, INC., KOPPERS COMPANY and THE KOPPERS ERECTING CORPORATION, respectively, all corporations of the State of Delaware, and having been signed by a majority of the trustees of FUEL INVESTMENT ASSOCIATES, a joint-stock association as defined by Section 59B of the General Corporation Law of the State of Delaware, was duly submitted to the shareholders of said KOPPERS UNITED COMPANY at a special meeting of said shareholders called and held separately from the meeting of stockholders or shareholders of any other corporation or joint-stock association after at least ten (10) days' but not more than forty (40) days' notice by mail, as provided by the Declaration of Trust by which KOPPERS UNITED COMPANY was organized and is regulated, on the 30th day of November, 1944, for the purpose of considering and taking action upon the proposed Agreement of Merger: that three million (3,000,000) shares of Common Stock and twenty-five thousand (25,000) shares of Preferred Stock of said joint-stock association were on said date issued and outstanding; that the holders of ~~one million two hundred and fifty thousand seven hundred thirty-two (1,250,732)~~ shares of Common Stock and ~~..... twenty-five thousand .....~~ (25,000) shares of Preferred Stock voted by ballot in favor of the approval, and the holders of ~~.....~~ shares of Common Stock and ~~.....~~ shares of Preferred Stock voted by ballot against the approval of the proposed Agreement of Merger, the said affirmative vote representing at least two-thirds ( $\frac{2}{3}$ ) of the total number of outstanding shares of Common Stock and at least two-thirds ( $\frac{2}{3}$ ) of the total number of outstanding shares of Preferred Stock of said joint-stock association, and that thereby the Agreement of Merger was at said meeting duly adopted as the act of the shareholders of said KOPPERS UNITED COMPANY and the duly adopted agreement of the said joint-stock association.

WITNESS My hand and the seal of said KOPPERS UNITED COMPANY on this 30th day of November, 1944.

*E. S. Ruffin Jr.*  
Assistant Secretary

I, *E. S. Ruffin Jr.* Assistant Secretary of FUEL INVESTMENT ASSOCIATES, a joint-stock association as defined by Section 59B of the General Corporation Law of the State of Delaware, hereby certify, as such Assistant Secretary and under the seal of the said joint-stock association, that the Agreement of Merger to which this certificate is attached after having been first duly signed on behalf of the said joint-stock association by a majority of the trustees thereof and having been signed by a majority of the directors of KOPPERS COMPANY, INC., KOPPERS COMPANY and THE KOPPERS ERECTING CORPORATION, respectively, all corporations of the State of Delaware, and having been signed by a majority of the trustees of KOPPERS UNITED COMPANY, a joint-stock association as defined by Section 59B of the General Corporation Law of the State of Delaware, was duly adopted, pursuant to the Declaration of Trust by which FUEL INVESTMENT ASSOCIATES was organized and is regulated, by the unanimous written consent of the shareholders holding three thousand (3,000) shares of the Common Stock and three hundred fifteen thousand six hundred thirty (315,630) shares of the Preferred Stock of said joint-stock association, the same being all of the shares issued and outstanding, and that a signed copy of such consent is attached hereto and made a part of the Agreement of Merger.

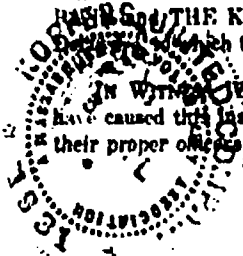
WITNESS My hand and the seal of said FUEL INVESTMENT ASSOCIATES on this 30th day of November, 1944.

*E. S. Ruffin Jr.*  
Assistant Secretary

UNANIMOUS CONSENT TO ADOPTION OF AGREEMENT OF MERGER  
BY THE SHAREHOLDERS OF FUEL INVESTMENT ASSOCIATES

The subscribers, KOPPERS UNITED COMPANY and KOPPERS COMPANY, being all of the shareholders of FUEL INVESTMENT ASSOCIATES, a joint-stock association as defined by Section 59B of the General Corporation Law of the State of Delaware, do hereby give their consents in writing to the adoption by said FUEL INVESTMENT ASSOCIATES of the Agreement of Merger between said FUEL INVESTMENT ASSOCIATES and KOPPERS UNITED COMPANY, a joint-stock association as defined by Section 59B of the General Corporation Law of the State of Delaware, and KOPPERS COMPANY, INC., KOPPERS COMPANY, THE KOPPERS ERECTING CORPORATION, all corporations of the State of Delaware, to which this instrument of consent is attached.

IN WITNESS WHEREOF, KOPPERS UNITED COMPANY and KOPPERS COMPANY have caused this instrument to be signed and their respective seals to be hereunto affixed by their proper officers thereunto duly authorized this 8th day of November, 1944.



Attest:

*E. Ruffin, Jr.*  
Assistant Secretary

Attest:

*C. C. Crick*  
Assistant Secretary

KOPPERS UNITED COMPANY

By *[Signature]*  
Vice President

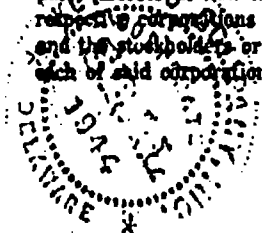
KOPPERS COMPANY

By *Stanley N. Brown*  
Vice President



00007

THE FOREGOING AGREEMENT OF MERGER, Having been executed by a majority of the directors or trustees of each party thereto, and having been adopted separately by the stockholders of each corporate party thereto, in accordance with the provisions of the General Corporation Law of the State of Delaware, and having been adopted separately by the shareholders of each joint-stock association which is a party thereto, in accordance with the respective Declarations of Trust under which said joint-stock associations were organized and are regulated, and that fact having been certified on said Agreement of Merger by the Assistant Secretary of each party thereto, the Vice President and Assistant Secretary of each party thereto do now hereby execute the said Agreement of Merger under the seals of their respective corporations or joint-stock associations by authority of the directors or trustees and the stockholders or shareholders thereof, as the respective act, deed and agreement of each of said corporations or joint-stock associations, on this 24th day of November, 1944.



KOPPERS COMPANY, INC.

By Stanley N. Brown.....  
Vice President

By C. C. Brick.....  
Assistant Secretary



KOPPERS COMPANY

By Stanley N. Brown.....  
Vice President

By C. C. Brick.....  
Assistant Secretary



THE KOPPERS ERECTING CORPORATION

By W. A. DeLoe.....  
Vice President

By E. S. Ruppel, Jr......  
Assistant Secretary



KOPPERS UNITED COMPANY

By W. A. DeLoe.....  
Vice President

By E. S. Ruppel, Jr......  
Assistant Secretary



FUEL INVESTMENT ASSOCIATES

By W. A. DeLoe.....  
Vice President

By E. S. Ruppel, Jr......  
Assistant Secretary

COMMONWEALTH OF PENNSYLVANIA / ss.  
COUNTY OF ALLEGHENY

BE IT REMEMBERED That on this 11th day of November, 1944, personally came before me  
....., a Notary Public in and for the County and Commonwealth afore-  
said, Stanley N. Brown, Vice President of KOPPERS COMPANY, INC., a corpora-  
tion of the State of Delaware and one of the corporations described in and which executed the  
foregoing Agreement of Merger, known to me personally to be such, and he the said Stanley  
N. Brown as such Vice President duly executed said Agreement of Merger before  
me and acknowledged said Agreement of Merger to be the act, deed and agreement of said  
KOPPERS COMPANY, INC.; that the signatures of the said Vice President and Assistant  
Secretary of said corporation to said foregoing Agreement of Merger are in the handwriting  
of said Vice President and Assistant Secretary of said KOPPERS COMPANY, INC.; and that  
the seal affixed to said Agreement of Merger is the corporate seal of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of office the day and year  
aforesaid.

Martha W. Johnson  
Notary Public

COMMONWEALTH OF PENNSYLVANIA / ss.  
COUNTY OF ALLEGHENY

BE IT REMEMBERED That on this 11th day of November, 1944, personally came before me  
....., a Notary Public in and for the County and Commonwealth afore-  
said, Stanley N. Brown, Vice President of KOPPERS COMPANY, a corporation of  
the State of Delaware and one of the corporations described in and which executed the fore-  
going Agreement of Merger, known to me personally to be such, and he the said Stanley  
N. Brown as such Vice President duly executed said Agreement of Merger before me  
and acknowledged said Agreement of Merger to be the act, deed and agreement of said  
KOPPERS COMPANY; that the signatures of the said Vice President and Assistant Secretary  
of said corporation to said foregoing Agreement of Merger are in the handwriting of said  
Vice President and Assistant Secretary of said KOPPERS COMPANY; and that the seal  
affixed to said Agreement of Merger is the corporate seal of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of office the day and year  
aforesaid.

Martha W. Johnson  
Notary Public

COMMONWEALTH OF PENNSYLVANIA / ss.  
COUNTY OF ALLEGHENY

BE IT REMEMBERED That on this 11th day of November, 1944, personally came before me  
aforesaid, H. Doolittle, Vice President of THE KOPPERS ERECTING COR-  
PORATION, a corporation of the State of Delaware and one of the corporations described in  
and which executed the foregoing Agreement of Merger, known to me personally to be such,  
and he the said H. Doolittle as such Vice President duly executed said Agree-  
ment of Merger before me and acknowledged said Agreement of Merger to be the act, deed  
and agreement of said THE KOPPERS ERECTING CORPORATION; that the signatures  
of the said Vice President and Assistant Secretary of said corporation to said foregoing Agree-  
ment of Merger are in the handwriting of said Vice President and Assistant Secretary of said  
THE KOPPERS ERECTING CORPORATION; and that the seal affixed to said Agreement  
of Merger is the corporate seal of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of office the day and year  
aforesaid.

Martha W. Johnson  
Notary Public

COMMONWEALTH OF PENNSYLVANIA  
COUNTY OF ALLEGHENY

ss.

BE IT REMEMBERED That on this 9<sup>th</sup> day of November, 1944, personally came before me  
a Notary Public in and for the County and Commonwealth  
aforesaid, *H. Soslitt*, Vice President of KOPPERS UNITED COMPANY,  
a joint-stock association as defined by Section 59B of the General Corporation Law of the State  
of Delaware, and one of the parties described in and which executed the foregoing Agreement  
of Merger, known to me personally to be such, and he the said *H. Soslitt*  
as such Vice President duly executed said Agreement of Merger before me and acknowledged  
said Agreement of Merger to be the act, deed and agreement of said KOPPERS UNITED  
COMPANY; that the signatures of the said Vice President and Assistant Secretary of said  
joint-stock association to said foregoing Agreement of Merger are in the handwriting of the  
said Vice President and Assistant Secretary of said KOPPERS UNITED COMPANY; and  
that the seal affixed to said Agreement of Merger is the common seal of said joint-stock  
association.



IN WITNESS WHEREOF, I have hereunto set my hand and seal of office the day and year

*Martha W. Johnson*  
Notary Public

COMMONWEALTH OF PENNSYLVANIA  
COUNTY OF ALLEGHENY

ss.

Martha W. JOHNSON, Notary P.  
MY COMMISSION EXPIRES  
FEBRUARY 17, 1946

BE IT REMEMBERED That on this 9<sup>th</sup> day of November, 1944, personally came before me  
a Notary Public in and for the County and Commonwealth  
aforesaid, *H. Soslitt*, Vice President of FUEL INVESTMENT ASSOCI-  
ATES, a joint-stock association as defined by Section 59B of the General Corporation Law of  
the State of Delaware, and one of the parties described in and which executed the foregoing  
Agreement of Merger, known to me personally to be such, and he the said *H. Soslitt*  
*H. Soslitt* as such Vice President duly executed said Agreement of Merger before  
me and acknowledged said Agreement of Merger to be the act, deed and agreement of said  
FUEL INVESTMENT ASSOCIATES; that the signatures of the said Vice President and  
Assistant Secretary of said joint-stock association to said foregoing Agreement of Merger  
are in the handwriting of the said Vice President and Assistant Secretary of said FUEL  
INVESTMENT ASSOCIATES; and that the seal affixed to said Agreement of Merger is the  
common seal of said joint-stock association.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of office the day and year  
aforesaid.

*Martha W. Johnson*  
Notary Public



Martha W. JOHNSON, Notary P.  
MY COMMISSION EXPIRES  
FEBRUARY 17, 1946

60050

MAKE CERTIFICATE AS FOLLOWS:  
Certificate of Agreement of Merger  
between the "KOPPERS COMPANY, INC.",  
"KOPPERS COMPANY", "THE KOPPERS  
ERECTING CORPORATION", corporations  
organized and existing under the laws  
of the State of Delaware, "KOPPERS  
UNITED COMPANY", and "FUEL INVESTMENT  
ASSOCIATES", corporations organized  
and existing under the laws of the  
State of Massachusetts, under the  
name of "KOPPERS COMPANY, INC.", as  
received and filed in this office the  
ninth day of November, A. D. 1944, at  
4:30 o'clock P.M.  
And I do hereby further certify that  
the aforesaid Corporation shall be  
governed by the laws of the State of  
Delaware.

00051



899020060

FILED

JAN 20 1989  
10 AM  
*Mabel H. Fisher*  
SECRETARY OF STATE

RESTATED CERTIFICATE OF INCORPORATION  
OF  
KOPPERS COMPANY, INC.

KOPPERS COMPANY, INC., a corporation organized and existing under the laws of the State of Delaware (the "Corporation"), hereby certifies as follows:

1. The name of the Corporation is Koppers Company, Inc. The date of filing its original Certificate of Incorporation with the Secretary of State was September 30, 1944.

2. This Restated Certificate of Incorporation restates and integrates and further amends the Certificate of Incorporation of the Corporation by restating the Certificate of Incorporation in its entirety.

3. The text of the Certificate of Incorporation as amended or supplemented heretofore is further amended hereby to read as herein set forth in full:

RESTATED  
CERTIFICATE OF INCORPORATION  
OF  
KOPPERS COMPANY, INC.

FIRST: The name of the corporation is Koppers Company, Inc. (hereinafter referred to as the "Corporation").

SECOND: The registered office of the Corporation is to be located at 1209 Orange Street, in the City of Wilmington, in the County of New Castle, in the State of Delaware. The name of the Corporation's registered agent at that address is The Corporation Trust Company.

THIRD: The purpose of the Corporation is to engage in any lawful act or activity for which a corporation may be organized under the Delaware General Corporation Law.

FOURTH: The total number of shares of stock which the Corporation is authorized to issue is Five Thousand (5,000) shares of Common Stock, par value one dollar (\$1.00) per share, and One Million (1,000,000) shares of Preferred Stock, no par value.

The Board of Directors of the Corporation is hereby expressly granted the authority to fix by resolution or resolutions providing for the issue of shares of one or more series of Preferred Stock any of the designations, preferences and rights, and the qualifications, limitations or restrictions thereof, pertaining to each such series of Preferred Stock to the full extent permitted by Section 151 of the Delaware General Corporation Law, as amended from time to time.

FIFTH: The following provisions are inserted for the management of the business and for the conduct of the affairs of the Corporation, and for further definition, limitation and regulation of the powers of the Corporation and of its directors and stockholders:

(1) The number of directors of the Corporation shall be such as from time to time shall be fixed by, or in the manner provided in, the By-Laws. Election of directors need not be by ballot unless the By-Laws so provide.

(2) The Board of Directors shall have power without the assent or vote of the stockholders of the Corporation to make, alter, amend, change, add to or repeal the By-Laws of the Corporation; to authorize and cause to be executed mortgages and liens upon all or any part of the property of the Corporation; to determine the use and disposition of any surplus or net profits; and to fix the times for the declaration and payment of dividends.

(3) The directors of the Corporation in their discretion may submit any contract or act for approval or ratification at any annual meeting of the stockholders of the Corporation or at any meeting of the stockholders called for the purpose of considering any such act or contract, and any contract or act that shall be approved or be ratified by the vote of the holders of a majority of the stock of the Corporation which is represented in person or by proxy at such meeting and entitled to vote thereat (provided that a lawful quorum of stockholders be there represented in person or by proxy) shall be as valid and as binding upon the Corporation and upon all the stockholders as though it had been approved or ratified by every stockholder of the Corporation, whether or not the contract or act would otherwise be open to legal attack because of directors' interest, or for any other reason.

(4) In addition to the powers and authorities hereinbefore or by statute expressly conferred upon them, the directors of the Corporation are hereby empowered to exercise all such powers and do all such acts and things as may be exercised or done by the Corporation; subject, nevertheless, to the provisions of the statutes of Delaware, of this certificate, and to any By-Laws from time to time made by the stockholders; provided, however, that no By-Laws so made shall invalidate any prior act of the directors of the Corporation which would have been valid if such By-Law had not been made.

SIXTH: The Corporation shall, to the full extent permitted by Section 145 of the Delaware General Corporation Law, as amended from time to time, indemnify all persons whom it may indemnify pursuant thereto.

SEVENTH: The personal liability of the directors of the Corporation is hereby eliminated to the fullest extent permitted by Section 102 of the Delaware General Corporation Law, as the same may be amended or supplemented.

EIGHTH: The Corporation reserves the right to amend, alter, change or repeal any provision contained in this certificate of incorporation in the manner now or hereafter prescribed by law, and all rights and powers conferred hereon on stockholders, directors and officers are subject to this reserved power.

4. This Restated Certificate of Incorporation was duly adopted by unanimous written consent of the Board of Directors and the sole stockholder of the Corporation in accordance with the applicable provisions of Sections 141, 228, 242 and 245 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, KOPPERS COMPANY, INC. has caused this certificate to be signed by Roy G. Turner, its Executive Vice President and Chief Financial Officer and attested by Jill M. Blundon, its Vice President, General Counsel and Secretary as of the 20th day of January, 1989.

KOPPERS COMPANY, INC.

By Roy G. Turner  
Executive Vice President  
and Chief Financial Officer

ATTEST:

By Jill M. Blundon  
Vice President, General Counsel  
and Secretary

FILED

JAN 26 1989

729024 015

CERTIFICATE OF AMENDMENT

OF

RESTATED CERTIFICATE OF INCORPORATION

KOPPERS COMPANY, INC. (the "Corporation"), a corporation existing under and by virtue of the General Corporation Law of the State of Delaware (the "General Corporation Law"), does hereby certify:

FIRST: That the Board of Directors of the Corporation has adopted in accordance with Section 141(f) of the General Corporation Law the following resolution by written consent proposing and declaring advisable an amendment to the Restated Certificate of Incorporation of the Corporation, and said written consent was filed with the minutes of the Corporation:

RESOLVED, that the Restated Certificate of Incorporation of the Corporation (the "Certificate") be amended by changing Article FIRST thereof so that, as amended, said Article shall be and read as follows:

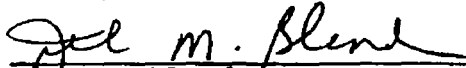
"FIRST: The name of the corporation is Beazer Materials and Services, Inc. (hereinafter referred to as the "Corporation")."

SECOND: That in lieu of a meeting of the sole stockholder of the Corporation, such stockholder has given written consent to said amendment in accordance with Section 228(a) of the General Corporation Law, and said written consent was filed with the minutes of the Corporation.

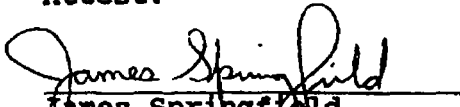
THIRD: That the aforesaid amendment was duly adopted in accordance with the applicable provisions of Sections 141, 228 and 242 of the General Corporation Law.

FOURTH: That the capital of the Corporation will not be reduced under or by reason of said amendment.

IN WITNESS WHEREOF, the Corporation has caused  
this certificate to be signed by its Vice President and  
Assistant Secretary this 16th day of January, 1989.

  
Jill M. Blundon,  
Vice President, General  
Counsel and Secretary

Attest:

  
James Springfield  
Assistant Secretary



**FILED**

MAR 26 1990

720085092  
CERTIFICATE OF AMENDMENT

OF

*[Signature]*  
SECRETARY OF STATE

RESTATED CERTIFICATE OF INCORPORATION

10 Am

BEAZER MATERIALS AND SERVICES, INC. (the "Corporation"),  
a corporation existing under and by virtue of the General  
Corporation Law of the State of Delaware (the "General  
Corporation Law"), does hereby certify:

FIRST: That the Board of Directors of the Corporation  
has adopted in accordance with Section 141(f) of the  
General Corporation Law the following resolution by  
written consent proposing and declaring advisable an  
amendment to the Restated Certificate of Incorporation  
of the Corporation, and said written consent was filed  
with the minutes of the Corporation:

"RESOLVED, that the Board of Directors of the  
Corporation hereby declares that the Restated  
Certificate of Incorporation of the Corporation  
(the "Certificate") be amended, effective April 16,  
1990, by changing Article FRIST thereof so that, as  
amended, said Article shall be and read as follows:

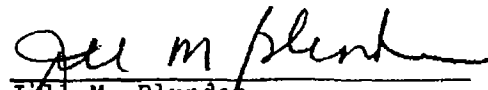
"FIRST: the name of the Corporation is Beazer East,  
Inc. (hereinafter referred to as the  
"Corporation")."

SECOND: That in lieu of a meeting of the sole  
stockholder of the Corporation entitled to vote, such  
stockholder has given written consent to said amendment  
in accordance with Section 228(a) of the General  
Corporation Law, and said written consent was filed with  
the minutes of the Corporation.

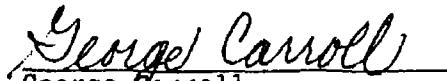
THIRD: That the aforesaid amendment was duly adopted in  
accordance with the applicable provision of Sections  
141, 228, and 242 of the General Corporation Law.

FOURTH: That the capital of the Corporation will not be reduced under or by reason of said amendment.

IN WITNESS WHEREOF, the Corporation has caused this certificate to be signed by its Vice President and Assistant Secretary this 23<sup>rd</sup> day of March, 1990.

  
Jyll M. Blundon  
Vice President, General  
Counsel and Secretary

Attest:

  
George Carroll  
Assistant Secretary

(Seal)

CERTIFICATE OF INCORPORATION

OF

THE KODDEFS COMPANY

\* \* \* \* \*

FIRST. The name of this corporation is  
THE KODDEFS COMPANY.

SECOND. Its principal office in the State of Delaware is located at No. 7 West Tenth Street, in the City of Wilmington, County of New Castle. The name and address of its resident agent is the Corporation Trust Company of America, No. 7 West Tenth Street, Wilmington, Delaware.

THIRD. The nature of the business, or objects or purposes proposed to be transacted, promoted or carried on are:

To design, construct, erect, operate and maintain for itself or for others, plants, equipment and apparatus for the carbonization, distillation and gasification of coal or coal products or other carbonaceous matter, and for the recovery, refinement and distribution of the products therefrom or any of them.

To buy, sell, refine and deal in and with coal or other carbonaceous matter and the products and by-products of the carbonization, distillation and gasification thereof.

To construct, own, operate, buy, sell, lease, transfer and deal in or with plants for the manufacture of gas from coke, from coal or other carbonaceous matter, from oil or from any combination thereof or from any other substance or material or combination of substances and materials.

To design, construct, own, operate, sell, lease or otherwise dispose of plants for the purification of gases or liquids or both.

To acquire, own, lease, occupy, use or develop any lands containing coal, iron, manganese or other ores, stone or oil and any woodlands or other lands for any purpose of the company.

To mine or otherwise extract or remove coal, ores, stone, minerals, and timber from any lands owned, acquired, leased or occupied by the company, or from any other lands.

To design, construct and operate machinery, apparatus and plants for the manufacture, treatment and refinement of and to manufacture, buy, sell or otherwise deal in and with iron, steel, manganese, copper, ores of any character, stone, wood and any other metals or materials and any of the products thereof and any articles consisting or partly consisting thereof.

To erect and maintain harbors, dams, reservoirs, pipe lines and other works for the purposes of its business.

To make and use roads, highways, railroads and tramways in connection with its operations.

To build vessels and ships and operate the same for the purpose of conveying materials to its plants and for the purpose of transporting its products to market.

To carry on the trades or businesses of iron masters, steel makers, steel converters, colliery proprietors, coke manufacturers, miners, smelters, engineers, tin-plate makers, and iron founders, in all their respective branches. To search for, get, work, raise, make merchantable, sell and deal in iron, coal, ironstone, brick-earth, brick, and other metals, materials, minerals or substances, and to manufacture and sell patent fuel. To carry on business as manufacturers of chemicals and manures, distillers, dye makers, gas makers, metallurgists, and mechanical engineers.

To design, construct, manufacture, erect, operate, sell,

lease or otherwise dispose of and to deal in and with machinery and plants for the generation of power of any character or kind.

To manufacture, compound, buy, sell and deal in and with dyes, drugs, and chemicals of every sort and description.

To engage in a general contracting business.

To manufacture, purchase, or otherwise acquire, own, mortgage, pledge, sell, assign, and transfer or otherwise dispose of, to invest, trade, deal in and deal with goods, wares, and merchandise, and real and personal property of every class and description.

To acquire, and pay for in cash, stock or bonds of this corporation or otherwise, the good will, rights, assets and property, and to undertake or assume the whole or any part of the obligations or liabilities of any person, firm, association or corporation.

To apply for, obtain, register, acquire, hold, use, sell, assign, lease, grant licenses in respect of, mortgage, or otherwise dispose of letters patent of the United States or any foreign country, patent rights, licenses and privileges, inventions, improvements and processes, copyrights, trade-marks and trade names, relating to or useful in connection with any business of this corporation.

To guarantee, purchase, hold, sell, assign, transfer, mortgage, pledge or otherwise dispose of shares of the capital stock of, or any bonds, securities or evidence of indebtedness created by any other corporation or corporations organized under the laws of this state, or any other state, country, nation or government, and while the owner thereof to exercise all the rights, powers and privileges of ownership.

To issue bonds, debentures or obligations of this corporation from time to time, for any of the objects or purposes of the corporation, and to secure the same by mortgage, pledge, deed of trust, or otherwise.

To purchase, hold, sell and transfer the shares of its own capital stock; provided it shall not use its funds or property for the purchase of its own shares of capital stock when such use would cause any impairment of its capital; and provided further that shares of its own capital stock belonging to it shall not be voted upon directly or indirectly.

To have one or more offices, to carry on all or any of its operations and business and without restriction or limit as to amount to purchase or otherwise acquire, hold, own, mortgage, sell, convey, or otherwise dispose of real and personal property of every class and description in any of the States, Districts, Territories or Colonies of the United States, and in any and all foreign countries, subject to the laws of such State, District, Territory, Colony or Country.

In general, to carry on any other business in connection with the foregoing, whether manufacturing or otherwise, and to have and exercise all the powers conferred by the laws of Delaware upon corporations formed under the act hereinafter referred to, and to do any or all of the things hereinbefore set forth to the same extent as natural persons might or could do.

The foregoing clauses shall be construed both as objects and powers; and it is hereby expressly provided that the foregoing enumeration of specific powers shall not be held to limit or restrict in any manner the powers of this corporation.

FOURTH. The capital stock of this corporation shall consist of Sixty Thousand (60,000) shares of cumulative, participating, preferred stock of the par value of Forty (\$40.00) dollars per share and Six Hundred Thousand (600,000) shares of common stock without nominal or par value. Such shares of preferred stock may be issued from time to time by the corporation for the price of

the par value thereof, or Forty (\$40.00) Dollars per share, as the same may be authorized from time to time by the Board of Directors. Such common stock without nominal or par value may be issued by the corporation from time to time, for such consideration as may be fixed therefor from time to time by the Board of Directors.

The holders of said preferred shares shall be entitled to receive during each fiscal year, out of the net earnings of the company, preferential cumulative dividends at the rate of Two Dollars and Forty Cents (\$2.40) per share of such preferred stock per annum from the date of issue thereof, payable on the second day of January in each year, in preference and priority to any payment of any dividends upon the common stock. After the payment of said preferential and cumulative dividends for any fiscal year to the holders of the preferred stock, any further amounts declared in dividends for the said year shall be paid to the holders of the common stock to the extent of Two Dollars and Forty Cents (\$2.40) per share, and should there be any further amount declared in dividends for said year, such further amounts shall be divided ratably among the holders of preferred and common stock in proportion to the respective holdings of each; provided, however, that although the Board of Directors may in their discretion declare dividends during any fiscal year on the common stock, no such dividend shall be declared on the common stock unless all accumulated and unpaid dividends for previous years, if any, and for the current year on the preferred stock shall have been paid.

In case of the dissolution of the corporation, the holders of the preferred stock shall be entitled to preference in the distribution of the assets and property of the corporation, and

any and all such assets and property, in case of such dissolution shall be applied, first, to the payment in full of the par value of the said preferred stock, or Forty (\$40.00) Dollars per share, together with all accumulated and unpaid dividends thereon, in preference and priority to any payment upon the common stock; and, second, to the payment of Forty (\$40.00) Dollars to each share of the common stock; and the balance remaining shall be divided equally per share among the holders of the preferred and common stock.

Any stock dividend shall consist of common and preferred stock in proportion to the amounts of each such class of stock outstanding at the time. The portion of any such dividend consisting of preferred stock shall be payable to the holders of preferred stock, and the portion of such dividend consisting of common stock shall be payable to the holders of common stock. The holders of one class of stock shall have no rights in that portion of any stock dividend consisting of stock of the other class.

The holders of preferred stock upon any increase of the capital stock of this company, whether the same be made in common or preferred stock, shall have no pre-emptive right to subscribe to the same either at par or at the price at which the same shall be offered to others for sale.

The preferred stock shall be subject to redemption, either for reissue, retirement or any lawful purpose whatsoever, at the option of the company, in whole or in part, forthwith upon written notice to the holders thereof at the par value of Forty (\$40.00) Dollars per share, together with all accumulated and unpaid dividends thereon.



The stockholders of this corporation, both preferred and common, shall, as to all books, accounts, documents and records thereof (other than the stock ledger) have the right to inspect the same only at such times and places and under such conditions and regulations as the by-laws may prescribe, or in the absence of such provision in the by-laws, then only as the Board of Directors may from time to time determine.

No stockholder shall have any right of inspecting any account, book, document or record of this corporation except as conferred by statute or authorized by the by-laws or by a resolution of the Board of Directors.

FIFTH. The number of shares of preferred stock of the par value of Forty (\$40.00) Dollars each with which this corporation will commence business is none.

The number of shares of common stock without nominal or par value with which this corporation will commence business is One Hundred (100).

SIXTH. The names and places of residence of the subscribers to the capital stock and the number of shares subscribed for by each are as follows:

NAME	RESIDENCE	NO. OF SHARES
T. L. Croteau	Wilmington, Delaware	98
M. A. Bruce	Wilmington, Delaware	1
A. M. Hooven	Wilmington, Delaware	1

SEVENTH. This corporation is to have perpetual existence.

EIGHTH. The private property of the stockholders shall not be subject to the payment of corporate debts to any extent whatever.

NINTH. In furtherance, and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized:

To make and alter the by-laws of this corporation, to fix the amount to be reserved as working capital over and above its capital stock paid in, to authorize and cause to be executed mortgages and liens upon the real and personal property of this corporation.

If the by-laws so provide, to designate two or more of its number to constitute an executive committee, which committee shall for the time being, as provided in said resolution or in the by-laws of this corporation, have and exercise any or all of the powers of the Board of Directors in the management of the business and affairs of this corporation, and have power to authorize the seal of this corporation to be affixed to all papers which may require it.

Pursuant to the affirmative vote of the holders of at least a majority of the stock issued and outstanding, having voting power, given at a stockholders' meeting duly called for that purpose, or when authorized by the written consent of at least a majority of the holders of the voting stock issued and outstanding, the Board of Directors shall have power and authority at any meeting to sell, lease or exchange all of the property and assets of this corporation, including its good will and its corporate franchises, upon such terms and conditions as its board of directors deem expedient and for the best interest of the corporation.

This corporation may in its by-laws confer powers upon its directors in addition to the foregoing, and in addition to the powers and authorities expressly conferred upon them by the statute. Both stockholders and directors shall have power, if the by-laws so provide, to hold their meetings, and to have one or more offices within or without the State of Delaware, and to keep the books of this corporation (subject to the provisions of

the statutes), outside of the State of Delaware at such places as may be from time to time designated by the board of directors.

TENTH. This corporation reserves the right to amend, alter, change or repeal any provision contained in this certificate of incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon stockholders herein are granted subject to this reservation.

WE, THE UNDERSIGNED, being each of the original subscribers to the capital stock hereinbefore named for the purpose of forming a corporation to do business both within and without the State of Delaware, and in pursuance of the General Corporation Law of the State of Delaware being Chapter 65 of the Revised Code of Delaware, and the acts amendatory thereof and supplemental thereto, do make and file this certificate, hereby declaring and certifying that the facts herein stated are true, and do respectively agree to take the number of shares of stock hereinbefore set forth, and accordingly have hereunto set our hands and seals this 21<sup>st</sup> day of December, A. D. 1934.

In presence of

*Hubert E. Latta*

*J. P. Proctor*

*H. A. Bruce*

*J. M. Horner*



STATE OF DELAWARE  
COUNTY OF NEW CASTLE

} SS:

BE IT REMEMBERED that on this 9th day of December  
A. D. 1924, personally came before me Herbert E. Latter  
a Notary Public for the State of Delaware T. L. Orteau,  
M. A. Bruce and A. M. Hooven, parties to the fore-  
going Certificate of Incorporation, known to me personally to  
be such, and severally acknowledged the said Certificate to be  
the act and deed of the signers respectively and that the facts  
therein stated are truly set forth.

GIVEN under my hand and seal of office the day and year  
aforesaid.

*Herbert E. Latter*  
Notary Public.

CLEVELAND CLIFFS

#5984

Koppers Company, Inc. Corp. Records

**CERTIFICATE OF INCORPORATION**  
**OF**  
**KOPPERS COMPANY, INC.**

We, the undersigned, being each of the incorporators of this Corporation hereinafter named, do hereby associate to establish a corporation in pursuance of an act of the Legislature of the State of Delaware, entitled "An Act Providing a General Corporation Law" (approved March 10, 1899) and the Acts amendatory thereof and supplemental thereto, and do make and file this Certificate, hereby declaring and certifying that the facts herein stated are true and we do hereby certify as follows:

**FIRST:** The name of this Corporation is KOPPERS COMPANY, INC.

**SECOND:** The principal office or place of business of this Corporation in the State of Delaware is to be located at No. 100 West Tenth Street in the City of Wilmington, County of New Castle. The name of its resident agent is The Corporation Trust Company and the address of said resident agent is No. 100 West Tenth Street, Wilmington, Delaware.

**THIRD:** The nature of the business of this Corporation and the objects and purposes proposed to be transacted, promoted and carried on by it are as follows:

1. To purchase, acquire, sell, hold, exchange, pledge, hypothecate, deal in and dispose of stocks, bonds, notes, debentures or other evidences of indebtedness and obligations and securities of any individual, partnership, corporation, company or joint-stock association, domestic or foreign, or of any domestic or foreign state, government, or governmental authority or of any political or administrative subdivision or department thereof, and certificates or receipts of any kind representing or evidencing any interest in any such stocks, bonds, notes, debentures, evidences of indebtedness, obligations or securities; and, while the owner or holder of any such stocks, bonds, notes, debentures, evidences of indebtedness, obligations, securities, certificates or receipts to exercise all the rights, powers and privileges of ownership in respect thereof, including the right to vote thereon for any and all purposes.

2. To purchase or otherwise acquire, or obtain the use of, and to hold, maintain, develop, sell, lease, exchange, hire, convey, mortgage or otherwise dispose of or turn to account lands and leaseholds and any interests, estates and rights in real property, and any rights, licenses and privileges appurtenant to such property; to erect, construct, make, improve and operate or aid or subscribe for the erection, construction, making, improvement and operation of houses, buildings, plants, factories, stores, shops, offices, warehouses, mills, mines, wells, equipment, machinery and facilities of every kind and character and any and all other structures and erections of every description upon such property or which may appertain thereto or which may be necessary, useful, convenient or appropriate in connection therewith or with the business of this Corporation or any corporation, association, co-partnership or individual in which this Corporation shall be in any manner interested.

3. To lease or otherwise acquire stores, and to do a general merchandise business; to engage in any manufacturing, processing, mining, refining, trading, mercantile, commercial or transportation business, enterprise, venture or pursuit of any kind or character whatsoever, and to that end or for the purpose of investment or otherwise to acquire, lease, hold, own and dispose of or turn to account any and all property, real, personal or mixed, assets, stocks, bonds and rights of any and every kind, and to acquire, conduct, manage, operate or control the whole or any part of any such business conducted, managed, operated or controlled by any other corporation, association, co-partnership or individual.

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4. To improve, manage and deal in real property, including the building, construction and alteration of houses and other structures thereon, and the development of real property generally, the buying, selling and exchanging of real property and the renting and leasing of real property, improved and unimproved; to give mortgages on real property and borrow money thereon by mortgage or otherwise; to loan money upon real property and to take mortgages and assignments of mortgages on the same; to buy, sell and deal in bonds and loans secured by mortgages or other liens on real property.

5. To adopt, apply for, obtain, register, purchase, lease, take assignments or licenses of or otherwise acquire, or obtain the use of and to hold, protect, own, use, develop, introduce and otherwise dispose of, and to sell, assign, lease, grant licenses or other rights in respect to, and make contracts concerning or otherwise deal with, dispose of or turn to account any copyrights, trade-marks, trade names, brands, brand names, labels, patent rights, letters patent and patent applications of the United States of America or of any other country, government or authority, and any inventions, improvements, processes, formulae, mechanical and other combinations, licenses and privileges, whether in connection with or secured under letters patent or otherwise, to carry on any business whether manufacturing or otherwise, which is or shall be necessary, convenient, advisable or adaptable for the utilization by this Corporation in any way, directly or indirectly, of such letters patent and patent applications, trade-marks, trade names, copyrights and pending applications therefor, inventions, improvements, processes, formulae, mechanical and other combinations, licenses and privileges, or other items above mentioned.

6. To organize and to promote, and to facilitate the organization and promotion of subsidiary company or companies, and to convey, transfer or assign all or any part of its assets to any subsidiary company or companies in exchange for shares of the capital stock or other securities of such subsidiary company or companies, or otherwise.

7. To aid by the lending of money or in any other manner whatsoever, any corporation, association, co-partnership or individual and to do any acts or things which are or may appear necessary, useful, convenient or appropriate for the preservation, protection, improvement or enhancement of the value of the business or property of any corporation, association, co-partnership or individual.

8. To guarantee the payment of any dividends upon any stock and the principal or interest, or both, of or on any bonds or other obligations of any corporation, association, co-partnership or individual, and to guarantee the performance and fulfillment of any contracts or obligations made or entered into by any corporation, association, co-partnership or individual.

9. To enter into, make and perform contracts of every sort and description with any person, firm, association, corporation, municipality, body politic, county, state or government or colony or dependency of either thereof.

10. To acquire its own bonds or other obligations or shares of its capital stock and to re-sell or otherwise dispose of the same from time to time.

11. To borrow or raise money for any of the purposes of this Corporation, to issue bonds, debentures, notes or other obligations of any nature or in any manner for moneys so borrowed without limit as to amount, and if and to the extent so determined to secure the principal thereof, and the interest thereon, by mortgage upon, or pledge or conveyance or assignment in trust of, the whole or any part of the property of this Corporation, real or personal, including contract rights either at the time owned or thereafter acquired or in any other manner.

12. To acquire all or any part of the good will, rights, property and business of any person, firm, association or corporation heretofore or hereafter engaged in any business, to pay for the same in cash or stock or bonds of this Corporation or otherwise, to hold, utilize, or in any manner dispose of the whole or any part of the rights and properties so acquired,

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and to assume in connection therewith any liabilities of any such person, firm, association or corporation and conduct in any lawful manner the whole or any part of the business thus acquired.

13. To conduct its business in all or any of its branches in the State of Delaware and in any or all other States, territories, possessions, colonies and dependencies of the United States of America and in the District of Columbia, and in any one or more foreign countries; to have one or more offices within or without the State of Delaware; and to carry on all or any of its operations and business without restriction or limit as to amount; and to hold, purchase, mortgage and convey real and personal property both within and without the State of Delaware.

14. To carry out all or any part of the foregoing objects and purposes as principal, agent, contractor or otherwise, either alone or in conjunction or partnership with any other persons, firms, associations or corporations and in any part of the world, and in carrying on any of its business and for the attainment or furtherance of any of its objects and purposes to make and perform such agreements and contracts of any kind and description, and to do such acts and things and to exercise any and all such powers as a natural person could lawfully make, perform, do or exercise and, as aforesaid, to do anything and everything which is or may appear necessary, useful, convenient or appropriate for the attainment, furtherance or exercise of any of its purposes, objects or powers if not inconsistent with the laws of the State of Delaware; but this Corporation shall not by any implication or construction be deemed to possess the power of issuing bills, notes or other evidences of debt for circulation as money, or the power of carrying on the business of receiving deposits of money or the business of buying gold and silver bullion or foreign coins, or of constructing, maintaining or operating public utilities within the State of Delaware, and nothing in the purposes, objects and powers hereinbefore stated shall be construed to give this Corporation any rights, powers or privileges not permitted by the law of the State of Delaware to corporations organized under the laws of the State of Delaware.

The specification herein contained of particular powers of this Corporation is not in limitation, but rather in furtherance of the powers granted to this Corporation under the laws of the State of Delaware under and pursuant to the provisions of which this Corporation is formed, it being intended that this Corporation shall be authorized to do or cause to be done all things permitted by any statute or law of the State of Delaware applicable to this Corporation.

FOURTH: The total number of shares of stock which this Corporation shall have authority to issue is two million three hundred thousand (2,300,000) shares of which three hundred thousand (300,000) shall be Preferred Shares having a par value of One Hundred Dollars (\$100.00) per share and amounting in the aggregate to Thirty Million Dollars (\$30,000,000), and the remaining two million (2,000,000) shares shall be Common Shares of the par value of Ten Dollars (\$10.00) per share and amounting in the aggregate to Twenty Million Dollars (\$20,000,000), or a total aggregate authorized capital of Fifty Million Dollars (\$50,000,000).

The description of the various classes of the above shares of stock and the preferences, qualifications, limitations, restrictions and the special or relative rights or limitations granted to or imposed upon the shares of stock of each class and of each series thereof, except as herein authorized to be determined by the Board of Directors in respect of any particular class or series, are as follows:

A. No holder of any of the Preferred Stock or Common Stock of this Corporation shall be entitled or have any right, as such holder, to subscribe for or to purchase any part of any issue of shares of stock of any class whatever which this Corporation may hereafter issue or sell or any obligations or securities of whatever kind and character which this Corporation may hereafter issue or sell that are convertible into or exchangeable for any shares of stock of this Corporation or to which shall be attached or to which appertain any warrant or other



instrument conferring upon the holder or owner thereof the right to subscribe for or purchase from this Corporation any of its shares of stock.

B. Except as otherwise provided herein or as otherwise required by law, the entire voting power of this Corporation shall be vested exclusively in the holders of its Common Stock and the holders of the Preferred Stock shall not have any voting power or any right to participate in any meeting and shall not be considered stockholders for the purpose of any election, meeting, consent or waiver of notice; provided, however, that if, whenever and during the period that four (4) or more, and less than twelve (12), quarterly dividends on any series of the Preferred Stock shall have accrued and be unpaid, the holders of the Preferred Stock, voting as one class under the provisions for cumulative voting contained in Article Eighth hereof, shall forthwith become entitled to elect the minimum number of directors necessary to constitute one-third (1/3) of the members of the Board of Directors, and if, whenever and during the period that twelve (12) or more quarterly dividends on any series of the Preferred Stock shall have accrued and be unpaid, the holders of the Preferred Stock, voting as one class under the said provisions for cumulative voting, shall forthwith become entitled to elect the minimum number of directors necessary to constitute a majority of the Board of Directors, and thereafter as long as such right of the holders of the Preferred Stock to elect members of the Board of Directors continues said holders of the Preferred Stock shall be entitled to notice of all meetings of stockholders of this Corporation at which members of the Board of Directors of this Corporation are to be elected. Whenever either of such rights shall accrue to the Preferred Stockholders, the Secretary of this Corporation, upon the request of the holders of twenty-five per cent. (25%) or more of the outstanding Preferred Stock shall give notice to all of the stockholders of a special meeting of all of the stockholders for the election of a new Board of Directors, and upon the election and qualification of such new Board of Directors, the term of office of the members of the Board of Directors as theretofore constituted shall forthwith cease. Such voting rights in the case of twelve (12) or more quarterly dividends having accrued and being unpaid shall continue until the accrued and unpaid quarterly dividends are less than twelve (12) in number and such voting rights and the consequent right to notice of meetings of stockholders for the election of members of the Board of Directors, in the case less than twelve (12) quarterly dividends having accrued and being unpaid shall continue until all arrears shall have been paid. As the foregoing respective rights of the holders of the Preferred Stock shall terminate the Secretary of this Corporation shall forthwith, at the direction of the Chairman of the Board or the President or of holders of twenty-five per cent. (25%) of the Common Stock, call a meeting of the holders of the Preferred Stock and the Common Stock or a meeting of the holders of the Common Stock, as the case may be, for the election of a new Board of Directors and upon the election and qualification of such new Board of Directors the term of office of members of the Board of Directors as theretofore constituted shall forthwith cease. Whenever a vote of the Preferred Stock as a class is to be obtained under the provisions of this Paragraph B, twenty-five per cent. (25%) of the number of shares entitled to vote shall be necessary to constitute a quorum.

C. The Preferred Stock of the par value of One Hundred Dollars (\$100.00) per share may be divided into series and may be issued from time to time in series, each of which series shall be so designated as to distinguish the shares thereof from the shares of all other series and classes. Each series of the Preferred Stock shall consist of such number of shares as shall be fixed and determined in the resolution or resolutions adopted by the Board of Directors establishing such series; provided, however, that the total number of shares of Preferred Stock of all series at any one time outstanding shall not exceed in the aggregate the number of shares of such Preferred Stock authorized. All shares of any one series shall be alike in every particular. All shares of Preferred Stock shall be identical except that there may be variations between the different series as to the rate of dividend, the price at and the terms and conditions on which shares may be redeemed, the amounts payable upon shares in event of a voluntary liquidation, dissolution or winding up, sinking fund provisions for the redemption or purchase of shares in the event the shares of any series are issued with sinking

fund provisions, and the terms and conditions upon which shares may be converted in the event the shares of any series are issued with the privilege of conversion. Subject to the other provisions of this Article Fourth the Board of Directors is hereby expressly vested with authority from time to time by resolution to divide the Preferred Stock into series, to create, establish and provide for the issuance of each such series, and to fix and determine the relative rights and preferences of any and all series so established in the following respects:

(1) the designation of each such series (which may be by a number, letter or title) so as to distinguish the shares thereof from the shares of all other series and classes;

(2) the rate or rates of dividends upon each such series;

(3) the price at which and the terms and conditions on which shares of each such series may be redeemed, which price, terms and conditions may, but need not, vary according to the time or circumstances of such redemption;

(4) the amounts payable upon shares in event of a voluntary liquidation, dissolution or winding up, which amounts may, but need not, vary according to the time or circumstances of such liquidation, dissolution or winding up, but which in any event shall include all accrued and unpaid dividends on such shares at the time of the liquidation, dissolution or winding up;

(5) subject to any limitations imposed by law, the sinking fund provisions, if any, for the redemption or purchase of shares of each such series; and

(6) whether the shares of any series may be converted, and in the event that the shares of any series are issued with the privilege of conversion, the terms and conditions on which shares may be converted and the class or classes or series of shares of this Corporation into which or for which such shares may be converted.

D. The Preferred Stock shall be preferred over the shares of stock of all other classes as to assets and in the event of any liquidation, dissolution or winding up of this Corporation, the holders of the Preferred Stock shall be entitled to receive out of the assets of this Corporation available for distribution to its shareholders an amount which, in the event that such liquidation, dissolution or winding up is involuntary, shall be equal to One Hundred Dollars (\$100.00) plus all accrued and unpaid dividends, and which, in the event that such liquidation, dissolution or winding up is voluntary, shall be equal to the preferential amounts determined as hereinabove provided, for each share of Preferred Stock held by them before any distribution of the assets shall be made to the holders of shares of stock of any other class, but the holders of such Preferred Stock shall be entitled to no other or further amounts and the holders of the Common Stock shall be entitled, to the exclusion of the holders of the Preferred Stock, to share ratably according to the number of shares held by each in all of the assets of this Corporation remaining after making the distributions required by this Paragraph D to the holders of Preferred Stock. If, upon any such liquidation, dissolution or winding up of this Corporation, the assets distributable among the holders of the Preferred Stock shall be insufficient to permit the payment in full to such holders of the preferential amounts aforesaid, then such assets shall be distributed among the holders of the Preferred Stock ratably in accordance with the preferential amount each is entitled to receive.

E. This Corporation, at the option of the Board of Directors, may redeem each series of Preferred Stock as a whole or in part, at such price or prices not less than the par value thereof, at such time or times, in such manner and upon such ~~terms and conditions as may be fixed~~ *the* and determined by the Board of Directors by resolution at the time such series is established. Notice of each intended redemption shall be given by publication at least once in each of two successive calendar weeks, in each case on any day of the week, in one newspaper customarily published on each business day, printed in the English language, and published in and of general circulation in the Borough of Manhattan in the City of New York in the State of New York, the first such publication to be made not less than thirty (30) days nor more than sixty

(60) days prior to the date fixed for such redemption. A similar notice shall be mailed by this Corporation, postage prepaid, not less than thirty (30) days nor more than sixty (60) days prior to the date fixed for such redemption to the holders of record of the shares to be redeemed, addressed to each such shareholder at his address as the same appears upon the stock transfer books of this Corporation, but failure to mail such notice or any defect therein or in the mailing thereof shall not affect the validity of the proceedings for the redemption of any shares of Preferred Stock to be redeemed, and the mailing of such notice shall not be a condition of such redemption. In case of redemption of only a part of the outstanding shares of any series of Preferred Stock, the shares to be redeemed shall be selected pro rata or by lot or otherwise as the Board of Directors shall determine. On and after the date of redemption stated in such notice, each holder of shares of Preferred Stock called for redemption shall surrender his certificate for such shares to this Corporation at any place designated in such notice and shall thereupon be entitled to receive payment of the redemption price. In case less than all the shares represented by such surrendered certificate are redeemed, a new certificate shall be issued representing the non-redeemed shares. If the aforesaid notice of redemption shall have been duly published and if on or before the redemption date specified in such notice the funds necessary for such redemption shall have been deposited in trust for such purpose with a bank or trust company having a capital and surplus aggregating at least Ten Million Dollars (\$10,000,000), then, from and after the date of redemption so designated, notwithstanding that any certificate of Preferred Stock so called for redemption shall not have been surrendered for cancellation, the shares represented thereby so called for redemption shall no longer be deemed outstanding, dividends on such shares so called for redemption shall cease to accrue, and the holder thereof shall have no voting power in respect of such shares, and all rights with respect to the shares so called for redemption shall forthwith after such redemption date cease and determine, except only the right of the holder to receive the redemption price thereof, but without interest thereon; provided, however, that this Corporation may, at the option of the Board of Directors, by making the funds deposited as aforesaid immediately available to the holders of the shares so called for redemption (but at the full redemption price) terminate all rights of the holders of such shares on any date prior to the redemption date on or after the date on which the required deposit is made. To the extent that this Paragraph E does not otherwise provide, the Board of Directors is hereby expressly vested with full power and authority by resolution to fix and determine the price or prices (not less than the par value thereof) at which any series of Preferred Stock may be redeemed and the terms and conditions on which any series of the Preferred Stock may be redeemed from time to time and to fix and determine variations in any or all such respects as between series. Any shares of Preferred Stock redeemed by this Corporation may be reissued from time to time pursuant to appropriate resolution or resolutions of the Board of Directors of this Corporation except shares of any series of Preferred Stock the resolution creating which shall have provided against such reissuance.

F. The Preferred Stock shall be preferred over the shares of stock of all other classes as to dividends and the holders of record of each series of Preferred Stock shall be entitled to receive, and this Corporation shall be required to pay when and as declared by the Board of Directors, out of any assets or funds of this Corporation available for the payment of dividends in accordance with law, dividends payable in respect of each such series quarterly on the first day of January, April, July and October in each year. Dividends on the Preferred Stock shall be cumulative from the first day of the quarterly dividend period in which issued whether or not earned or declared, but arrears in the payment thereof shall not bear interest. In the payment of dividends on the Preferred Stock, no series shall be preferred over any other series. No dividend on any outstanding series shall be declared or set apart for payment in full or in part for any quarterly dividend period unless the dividends on all other outstanding series shall have been or shall then be paid or declared and set apart for payment in as great a percentage of the applicable dividend rate per share or in full, as the case may be, for all prior quarterly dividend periods and for such quarterly dividend period. So long as any of the Preferred Stock shall be outstanding, this Corporation shall not pay or

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declare any dividend or make any distribution on or purchase or redeem any shares of any class of stock ranking junior to the Preferred Stock or pay any monies into or make any monies available for a sinking fund or retirement fund for the purchase or redemption of shares of any class of stock ranking junior to the Preferred Stock unless,

- (1) all dividends on the Preferred Stock of all series at the time outstanding for all past quarterly dividend periods and for the current quarterly dividend period shall have been paid or shall have been declared and a sum sufficient for the payment thereof shall have been set apart so as to be and continue to be available for the payment thereof; and
- (2) all amounts, if any, theretofore required to be set apart as and for all sinking funds for the Preferred Stock of all series then outstanding shall have been set aside so as to be and continue to be available for the purposes of or applied as provided or permitted by the provisions for such sinking funds.

G. Except with the consent of the holders of at least two-thirds ( $\frac{2}{3}$ ) of the Preferred Stock at the time outstanding, this Corporation may not at any time pay any dividend on any stock ranking junior to the Preferred Stock or make any distribution on any such stock, or redeem or purchase any shares of such stock for cash or property or in exchange for bonds or notes, if upon completion of such transaction

- (1) the aggregate disbursements in respect of all such dividends, distributions, redemptions and purchases subsequent to the date of the issuance of the initial issue of Preferred Stock

plus (2) one-third ( $\frac{1}{3}$ ) of the excess, if any, above Fifty-five Million Dollars (\$55,000,000) of the aggregate outstanding amount (as shown by a consolidated balance sheet of this Corporation and its consolidated subsidiaries) of funded debt and stocks of this Corporation and its consolidated subsidiaries, other than stocks of this Corporation ranking junior to the Preferred Stock,

will constitute a greater total than

- (a) the consolidated net income of this Corporation and its consolidated subsidiaries earned subsequent to the date of the issuance of the initial issue of Preferred Stock, after deduction of such part thereof, if any, as may have been applicable to stocks of consolidated subsidiaries not owned by this Corporation or other consolidated subsidiaries and also after deduction of all dividends paid or accrued subsequent to said date on the Preferred Stock,

plus (b) the proceeds in cash or in other assets, taken at their fair value to this Corporation, derived from the sale or exchange, subsequent to said date, of shares of this Corporation's stock ranking junior to the Preferred Stock or of obligations converted after issuance into shares of such stock, and

plus (c) Two Million Five Hundred Thousand Dollars (\$2,500,000), if the transaction in question is the payment of a dividend.

Notwithstanding the foregoing, this Corporation may at any time retire any of its shares of its stock ranking junior to the Preferred Stock with the proceeds of, or by means of, other shares of its stock ranking junior to the Preferred Stock

The terms "dividend" and "dividends", "distribution" and "distributions", as used in this Paragraph G, shall not include any dividends or distributions paid or made in shares of stock of this Corporation ranking junior to the Preferred Stock.

This Corporation may not at any time sell or issue any shares of its stock to any of its subsidiaries or permit any of its subsidiaries to purchase any shares of its stock.

H. Except with the consent of the holders of at least two-thirds ( $\frac{2}{3}$ ) of the Preferred Stock at the time outstanding, this Corporation may not take, or permit any consolidated

subsidiary to take, any action which will result in an increase (from the standpoint of the consolidated balance sheet of this Corporation and its consolidated subsidiaries) in the aggregate outstanding amount of securities evidencing funded debt of this Corporation and its consolidated subsidiaries and preferred stocks of its consolidated subsidiaries, unless upon consummation of such increase such amount will not exceed Forty Million Dollars (\$40,000,000), or unless, if the same shall exceed Forty Million Dollars (\$40,000,000), two-thirds ( $\frac{2}{3}$ ) of the excess thereof over Forty Million Dollars (\$40,000,000) will not exceed

- (1) the proceeds in cash or in other assets, taken at their fair value to this Corporation, derived from the sale or exchange, subsequent to the date of the issuance of the initial issue of Preferred Stock, of shares of this Corporation's stock or of obligations converted after issuance into shares of this Corporation's stock, minus all disbursements of assets or obligations of this Corporation made by this Corporation subsequent to said date in the purchase or redemption of shares of its stock,

plus (2) the consolidated net income of this Corporation and its consolidated subsidiaries earned subsequent to said date, after deduction of such part thereof, if any, as may have been applicable to stocks of consolidated subsidiaries not owned by this Corporation or other consolidated subsidiaries and also after deduction of all dividends paid and distributions made to stockholders of this Corporation subsequent to said date otherwise than in shares of stock of this Corporation.

1. Except with the consent of the holders of at least two-thirds ( $\frac{2}{3}$ ) of the Preferred Stock at the time outstanding, this Corporation may not issue or dispose of any shares of the Preferred Stock unless after the issuance or disposal thereof the aggregate outstanding amount (as shown by a consolidated balance sheet of this Corporation and its consolidated subsidiaries) of stocks and funded debt of this Corporation and its consolidated subsidiaries, other than stocks of this Corporation ranking junior to the Preferred Stock, will not exceed Fifty-five Million Dollars (\$55,000,000), or unless, if the same shall exceed Fifty-five Million Dollars (\$55,000,000), one-third ( $\frac{1}{3}$ ) of the excess thereof over Fifty-five Million Dollars (\$55,000,000) will not be greater than:

- (1) the proceeds in cash or other assets, taken at their fair value to this Corporation, derived from the sale or exchange, subsequent to the date of the issuance of the initial issue of Preferred Stock, of shares of this Corporation's stock ranking junior to the Preferred Stock or of obligations converted after issuance into shares of such stock, minus all disbursements of assets or obligations of this Corporation made by this Corporation subsequent to said date in the purchase or redemption of shares of its stock ranking junior to the Preferred Stock,

plus (2) the consolidated net income of this Corporation and its consolidated subsidiaries earned subsequent to said date, after deduction of such part thereof, if any, as may have been applicable to stocks of consolidated subsidiaries not owned by this Corporation or other consolidated subsidiaries and also after deduction of all dividends paid and distributions made subsequent to said date on stocks of this Corporation otherwise than in shares of stock of this Corporation.

J. Notwithstanding any other provision contained in this Article Four, this Corporation

- (1) may with the consent of the holders of at least a majority of the Preferred Stock then outstanding, but may not without such consent,

- (a) increase the authorized amount of Preferred Stock above three hundred thousand (300,000) shares; or

- (b) authorize stock ranking equally with the Preferred Stock; or

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- (2) may with the consent of the holders of at least two-thirds (2/3) of the Preferred Stock then outstanding, but may not without such consent, authorize stock ranking prior to the Preferred Stock.

No adverse or prejudicial change in the provisions of the Preferred Stock may at any time be made without the consent of the holders of at least two-thirds (2/3) of the Preferred Stock then outstanding, or if all of the Preferred Stock shall not be affected by any such change or changes, then without the consent of the holders of at least two-thirds (2/3) of the then outstanding Preferred Stock of the one or more series thereby affected.

K. Except with the consent of the holders of at least two-thirds (2/3) of the Preferred Stock then outstanding, this Corporation may not sell all, or substantially all, of its assets or merge or consolidate with another corporation or joint stock association; provided, however, that this restriction shall not apply to or operate to prevent any such sale, merger or consolidation, if at least thirty (30) days prior thereto this Corporation shall have given notice thereof to the holders of the Preferred Stock and immediately prior to the consummation thereof shall have purchased at the then applicable redemption price or prices, including any dividends accrued to the date of purchase, all Preferred Stock which shall have been tendered by the holders thereof for purchase at such price or prices; and provided further, that said restriction shall not apply to or operate to prevent any such merger or consolidation if

- (1) none of the rights or preferences of the Preferred Stock will be adversely affected thereby,
- (2) each holder of Preferred Stock will receive the same number of shares, with the same rights and preferences, of the surviving or resulting company as he held of the Preferred Stock,
- (3) the surviving or resulting company will have authorized or outstanding no class or series of stock, ranking prior to or equally with such stock received by the holders of the Preferred Stock, which does not correspond in its rights and preferences and in authorized amount to a class or series of stock which this Corporation had authorized immediately prior to the merger or consolidation, and
- (4) the surviving or resulting company, if it wishes to do so, will be able immediately, without violating the provisions relating to the preferred stock of such company which correspond to Paragraphs G, H or I of this Article Fourth,
  - (a) to pay a dividend on stock ranking junior to the stock received by the holders of the Preferred Stock,
  - (b) to cause an increase to be made in the aggregate outstanding amount (as shown by a consolidated balance sheet of such company and its consolidated subsidiaries) of securities evidencing funded debt of such company and its consolidated subsidiaries and preferred stocks of its consolidated subsidiaries, and
  - (c) to issue or dispose of shares of preferred stock of such company ranking equally with the stock received by the holders of the Preferred Stock.

Any vote of holders of the Preferred Stock required under this Paragraph K for any action shall be sufficient authorization so far as the Preferred Stock of any series is concerned for such action and when any such action is taken, holders of Preferred Stock of any series dissenting from such action shall not have any right to the payment of their shares by reason of such action.

L. For the purposes of this Article Fourth, the term "subsidiary" shall mean a corporation or joint-stock association of which this Corporation, directly or through other subsidiaries, owns at least a majority of the stock which is unlimited as to dividends and also a sufficient amount of stock to enable it, under the voting rights then possessed by such stock, to elect a majority of such corporation's or joint-stock association's directors or trustees; provided, however, that no corporation or joint-stock association of which this Corporation at any time

Page 9

at an election at which all stockholders entitled to vote for the election of directors or trustees are present in person or by proxy;

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during the year 1944 shall own more than one-half ( $\frac{1}{2}$ ) of the stock unlimited as to dividends and also sufficient stock to enable it to elect a majority of such corporation's or joint-stock association's directors or trustees if it were not for the existence of dividend arrears on preferred stock of such corporation or joint-stock association, shall be deemed to become a subsidiary merely because of a change in the voting rights of its respective classes of stock, resulting from payment of dividend arrears on preferred stock, which shall have the effect of vesting sufficient voting power in the stocks of such corporation or joint-stock association owned by this Corporation, directly or through subsidiaries, to enable this Corporation to elect a majority of such corporation's or joint-stock association's directors or trustees. Each subsidiary shall be deemed to be a consolidated subsidiary unless this Corporation in its discretion, as expressed by a resolution of its Board of Directors, shall determine to exclude the same from such classification, provided, however, that this Corporation may not exclude any subsidiary from such classification

(1) if immediately after the exclusion thereof, total investments in and advances to all non-consolidated subsidiaries, as shown by a consolidated balance sheet of this Corporation and its consolidated subsidiaries, shall exceed five per cent. (5%) of the total tangible assets, less applicable reserves shown on such balance sheet, or

(2) if this Corporation or any consolidated subsidiary shall have guaranteed any outstanding indebtedness or securities of such subsidiary.

A subsidiary so excluded shall remain excluded unless and until this Corporation, by a resolution of its Board of Directors, shall rescind such exclusion.

This Corporation may not make any additional investment in or advances to an excluded subsidiary if immediately after the same shall have been made total investments in and advances to all non-consolidated subsidiaries, as shown by a consolidated balance sheet of this Corporation and its consolidated subsidiaries, shall exceed five per cent. (5%) of the total tangible assets, less applicable reserves, shown on such balance sheet.

Tangible assets shall include all assets, as determined in accordance with sound accounting practice, except good will, patents, trade-marks and unamortized debt discount and expense.

In computing the amount of the investments in and advances to non-consolidated subsidiaries, both as a separate total and as part of total tangible assets, such investments and advances shall be taken at cost, except that any such investments and advances which shall have been owned at the date of the issuance of the initial issue of Preferred Stock shall be taken at the carrying value thereof on the books of this Corporation at such date.

The term "advances" shall not include accounts receivable arising in the ordinary course of business.

Earnings of an excluded subsidiary during the period of its exclusion shall be included in computing consolidated net income of this Corporation and its consolidated subsidiaries for such period only to the extent of the interest and dividends (exclusive of dividends paid in capital stock of such subsidiary) received from such subsidiary.

In computing net income earned subsequent to the date of the issuance of the initial issue of Preferred Stock there shall be taken into account all debits or credits to earned surplus which represent corrections of or offsets or additions to items included or deducted in arriving at net income for any period subsequent to said date, but there shall not be taken into account

(a) any other debits or credits to surplus.

(b) any additional taxes or interest thereon which may be determined to be payable, or any tax refunds and interest thereon which may be received, in respect of periods prior to said date,

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(c) any profits or losses arising from the sale or adjustment of carrying values of investment securities or fixed assets (other than from retirements of depreciable property in the ordinary course of business),

(d) any profits or losses arising from adjustments in reserves, other than adjustments made for the purpose of correcting or offsetting over-accruals or under-accruals made since said date, or

(e) any premiums paid to redeem any securities or any unamortized discount or expense or premiums existing in respect of any securities at the time of the redemption thereof.

In computing outstanding amounts of securities, funded debt shall be taken at the principal amount thereof, preferred stocks shall be taken at the par value thereof, or, if the same shall be without par value, then at the amount payable thereon in the event of involuntary liquidation, and common stocks of consolidated subsidiaries shall be taken at the book value thereof as shown by the accounts of such subsidiaries.

The term "funded debt" shall mean indebtedness maturing twelve (12) months or more after the date of its issue.

In the event that another corporation or corporations or joint-stock association or associations shall be merged into this Corporation or this Corporation shall be merged into or consolidated with another corporation or joint-stock association, there shall not be included in any subsequent computation of net income earned, or dividends paid or distributions made, or proceeds derived from the sale or exchange of securities, subsequent to the date of the issuance of the initial issue of Preferred Stock, any net income earned, or any dividends paid or distributions made, or any proceeds derived from the sale or exchange of securities, prior to the consummation of such merger or consolidation, by the corporation or corporations or joint-stock association or associations merged into this Corporation or into which this Corporation shall be merged or with which it shall be consolidated, or by subsidiaries of such corporation or corporations or joint-stock association or associations; except that if such corporation or corporations or joint-stock association or associations shall have been subsidiaries of this Corporation immediately prior to such merger or consolidation, the earnings thereof prior to such merger or consolidation shall be included in net income to the extent that the same would have been so included if such merger or consolidation had not taken place.

FIFTH: The names and places of residence of each of the incorporators are as follows:

Name	Residence
L. E. Gray	Wilmington, Delaware
L. H. Herman	Wilmington, Delaware
S. M. Brown	Wilmington, Delaware

SIXTH: This Corporation shall have perpetual existence.

SEVENTH: The private property of the stockholders of this Corporation shall not be subject to the payment of the corporate debts to any extent whatever.

EIGHTH: 1. The business of this Corporation shall be managed by its Board of Directors, except as may otherwise be required by law. The Board of Directors may, by resolution or resolutions passed by a majority of the whole Board, designate one or more committees, each committee to consist of three (3) or more directors which, to the extent provided in said resolution or resolutions or in the By-Laws of this Corporation, shall have and may exercise the powers of the Board of Directors in the management of the business and affairs of this Corporation and may have the power to authorize the seal of this Corporation to be affixed to all papers which may require it. Such committee or committees shall have such name or names as

may be stated in the By-Laws of this Corporation or as may be determined from time to time by resolution adopted by the Board of Directors.

2. The number of directors of this Corporation, which shall never be less than three (3), shall be fixed from time to time by the By-Laws and may be altered from time to time by amendment of the By-Laws. In case of any increase in the number of directors, the additional directors shall be elected as may be provided in the By-Laws.

3. The directors of this Corporation may, by a vote of the stockholders, be divided into one, two or three classes as provided by the laws of the State of Delaware.

4. This Corporation may have such office or offices outside the State of Delaware as the By-Laws may provide or permit.

5. No director of this Corporation need be a stockholder of this Corporation or a resident of the State of Delaware.

6. The Board of Directors may make By-Laws and from time to time may alter, amend or repeal any By-Laws, but any By-Laws made by the Board of Directors may be altered, amended or repealed by the stockholders at any annual meeting or at any special meeting, provided, in the case of any special meeting, that notice of such proposed alteration, amendment or repeal is included in the notice of such meeting, and the By-Laws may contain provisions prohibiting the amendment of particular provisions thereof without the consent of the holders of any specified percentage of the shares of any class of stock of this Corporation.

7. This Corporation, without action by its stockholders, shall have the power to issue any shares of stock authorized by this Certificate of Incorporation for such consideration as may be fixed from time to time by the Board of Directors. This Corporation, without action by its stockholders, shall have power to create and issue, whether or not in connection with the issue and sale of any shares of stock or other securities of this Corporation, rights or options entitling the holders thereof to purchase from this Corporation any shares of its capital stock, such rights or options to be evidenced by or in such instrument or instruments as shall be approved by the Board of Directors. The terms upon which, the time or times, which may be limited or unlimited in duration, at or within which, and the price or prices at which any such shares may be purchased from this Corporation upon the exercise of any such right or option shall be such as shall be fixed and stated in a resolution or resolutions adopted by the Board of Directors providing for the creation and issue of such rights or options, and, in every case, set forth or incorporated by reference in the instrument or instruments evidencing such rights or options; provided, however, that the consideration therefor shall be determined in the manner hereinabove provided in this Article Eighth for the fixing of the consideration for the issue of such stock.

8. This Corporation may, at any meeting of its Board of Directors, sell, lease or exchange all or substantially all of its property and assets, including its good will and its corporate franchises, upon such terms and conditions and for such consideration, which may be in whole or in part shares of stock in, and/or other securities of, any other corporation or corporations and any joint-stock association or associations as its Board of Directors shall deem expedient and for the best interests of this Corporation, when and as authorized by the affirmative vote of the holders of a majority of the Common Stock issued and outstanding given at a meeting duly called for that purpose, or when authorized by the written consent of the holders of a majority of the Common Stock issued and outstanding, and upon compliance with Paragraph K of Article Fourth hereof. This Corporation may sell, lease or exchange any of its property and assets, less than substantially all, upon such terms and conditions and for such consideration, which may be in whole or in part shares of stock in, and/or securities of, any other corporation or corporations and any joint-stock association or associations as the Board of Directors shall deem expedient for the best interests of this Corporation without any action by the stockholders of this Corporation.

9. The Board of Directors shall have power from time to time to set apart out of any funds of this Corporation available therefor a reserve for any proper purpose and to abolish such reserve and to fix and determine and to vary the amount of the working capital of this Corporation and to direct and determine the use and disposition of the working capital and of any capital surplus or net profits over and above the stated capital.

10. The stockholders and the Board of Directors shall have power to hold their meetings and to keep the books, documents and papers of this Corporation outside the State of Delaware at such place or places as from time to time may be provided by the By-Laws, except as otherwise required by the laws of the State of Delaware.

11. The Board of Directors from time to time shall determine whether and to what extent and at what times and places and under what conditions and regulations the accounts and books of this Corporation or any of them shall be open to the inspection of the stockholders, and no stockholder shall have any right to inspect any account, book, document or record of this Corporation except as conferred by law or as authorized by a resolution of the Board of Directors.

12. All elections of directors by stockholders shall be by ballot. Directors elected to fill vacancies may be elected in the manner provided for in the By-Laws.

13. This Corporation shall be entitled to treat the person in whose name any share of stock is registered as the owner thereof for all purposes and shall not be bound to recognize any equitable or other claim to or interest in such share on the part of any other person whether or not this Corporation shall have notice thereof except as is expressly provided otherwise by the laws of the State of Delaware.

14. Each stockholder shall have one vote for each share of stock having voting power registered in his name on the books of this Corporation; except that at all elections of directors each stockholder shall be entitled to as many votes as shall equal the number of his shares of stock of each class entitled to vote multiplied by the number of directors to be elected by that class, and he may cast all of such votes with respect to each class for a single nominee of such class or he may distribute them among any two or more of the nominees of such class as he may see fit. The nominees of each class of stock entitled to vote receiving the highest number of votes of the stockholders entitled to vote for such nominees, up to the number of directors to be elected by each class of stock entitled to vote, shall be elected.

15. This Corporation shall have power to cooperate with other corporations and with natural persons in the creation and maintenance of community funds or of charitable, philanthropic, benevolent or patriotic instrumentalities conducive to public welfare, and the Board of Directors may appropriate and expend for those purposes such sum or sums as they deem expedient and as in their judgment will benefit or contribute to the protection of the corporate interests.

16. This Corporation shall indemnify any and all of its directors or officers or former directors or officers or any person who may have served at its request as a director or officer of another corporation in which it owns shares of capital stock or of which it is a creditor against expenses actually and necessarily incurred by them in connection with the defense of any action, suit or proceeding in which they, or any of them, are made parties, or a party, by reason of being or having been directors or officers or a director or officer of this Corporation, or of such other corporation, except in relation to matters as to which any such director or officer or former director or officer or person shall be adjudged in such action, suit or proceeding to be liable for negligence or misconduct in the performance of duty. Such indemnification shall not be deemed exclusive of any other rights to which those indemnified may be entitled, under any by-law, agreement, vote of stockholders, or otherwise.

17. Special meetings of the Board of Directors may be called and held without the purpose of such meeting being stated in the notice thereof.

The foregoing enumeration of powers conferred on this Corporation and on its Board of Directors is intended to be in furtherance of and not in any way a limitation on the powers conferred by law.

NINTH: No arrangement with this Corporation in which any of the directors shall have an interest shall be void or voidable on account of such interest, nor shall any director so interested be liable to account, if such director shall disclose (or the directors shall have knowledge of, if authorization or ratification is to be by them) the nature of his interest, though not necessarily the details or extent thereof, and if such arrangement shall be authorized and ratified (a) at a meeting of the directors by vote resolution or consent of a disinterested majority of the directors, or (b) by a written vote or resolution signed by the holders of a majority of the shares of stock, entitled to vote generally, without a meeting, or (c) by a majority vote of the stockholders, entitled to vote generally.

No arrangement between this Corporation and any other company in which any of the directors shall have an interest solely by reason of being officers, minority stockholders or creditors of such company (or solely by reason of being directors thereof where such other company is a subsidiary of or otherwise affiliated or allied with this Corporation or owns a majority of the shares of this Corporation or where such arrangement is made by officers or agents of this Corporation in the ordinary performance of their duties and without the actual participation of such directors) shall be void or voidable on account of such interest, nor shall any such director be liable to account because of such interest, nor need any such interest be disclosed, and such director may vote in respect of such arrangement. Except in such instances, no director shall vote or act in respect of any arrangement with this Corporation in which he shall have an interest, and if he does so vote or act, his vote or action shall not be counted but shall not operate to render the arrangement void or voidable.

The disclosure required by this Article Ninth shall be sufficient if made (a) to the meeting of the directors or stockholders authorizing or ratifying the particular arrangement in question, or (b) by a general notice presented to a meeting of the directors or stockholders and filed with the Secretary stating that such director is a director of a specified company, and is to be regarded as interested in all arrangements with that company, after which it shall not be necessary for such director to give a special notice in regard to any particular arrangement with that company, or in regard to the nature of his interest in such particular arrangement.

As used in this Article Ninth, unless the context otherwise requires, "arrangement" shall include any contract, agreement, dealing or other transaction; "director" shall include any committee member, officer or agent of this Corporation; and "company" shall include corporation, association, partnership, trust and any form of business organization.

The provisions of this Article Ninth shall not make any transaction void or voidable which otherwise would be valid, nor give rise to any accounting with respect to any such transaction. None of the provisions of this Article Ninth, shall, however, be construed to protect against bad faith.

TENTH: Whenever a compromise or arrangement is proposed between this Corporation and its creditors or any class of them, and/or between this Corporation and its stockholders or any class of them, any court of equitable jurisdiction within the State of Delaware may, on the application in a summary way of this Corporation or of any creditor or stockholder thereof, or on the application of any receiver or receivers appointed for this Corporation under the provisions of Section 32.61 of the Revised Code of 1915 of said State, or on the application of trustees in dissolution or of any receiver or receivers appointed for this Corporation under the provisions of Section 45 of the General Corporation Law of the State of Delaware, order a meeting of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this Corporation, as the case may be, to be summoned in such manner as the said court directs. If a majority in number representing three-fourths (3/4) in value of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this Corporation, as

the case may be, agree to any compromise or arrangement and to any reorganization of this Corporation as consequence of such compromise or arrangement, the said compromise or arrangement and the said reorganization shall, if sanctioned by the court to which the said application has been made, be binding on all the creditors or class of creditors, and/or on all the stockholders or class of stockholders, of this Corporation, as the case may be, and also on this Corporation.

ELEVENTH: This Corporation shall have the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation in the manner now or hereafter prescribed by statute, but subject to the provisions of this Certificate of Incorporation, and all rights conferred upon the stockholders by this Certificate of Incorporation are granted subject to this reservation.

IN WITNESS WHEREOF, We have hereunto set our hands and seals this 30<sup>th</sup> day of Sept., 1944.

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.....

STATE OF DELAWARE } ss:  
COUNTY OF NEW CASTLE }

BE IT REMEMBERED, That on this 30<sup>th</sup> day of Sept., A. D. 1944, personally came before me Harold E. Grantland, a Notary Public for the State of Delaware, I. E. Gray, L. H. Herman and S. M. Brown, all of the parties to the foregoing Certificate of Incorporation, known to me personally to be such, and severally acknowledged the said certificate to be the act and deed of the signers respectively and that the facts therein stated are truly set forth.

GIVEN under my hand and seal of office the day and year aforesaid.

.....  
Notary Public.



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CERTIFICATE OF AMENDMENT

OF

RESTATED CERTIFICATE OF INCORPORATION

KOPPERS COMPANY, INC. (the "Corporation"), a corporation existing under and by virtue of the General Corporation Law of the State of Delaware (the "General Corporation Law"), does hereby certify:

FIRST: That the Board of Directors of the Corporation has adopted in accordance with Section 141(f) of the General Corporation Law the following resolution by written consent proposing and declaring advisable an amendment to the Restated Certificate of Incorporation of the Corporation, and said written consent was filed with the minutes of the Corporation:

RESOLVED, that the Restated Certificate of Incorporation of the Corporation (the "Certificate") be amended by changing Article FIRST thereof so that, as amended, said Article shall be and read as follows:

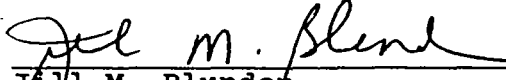
"FIRST: The name of the corporation is Beazer Materials and Services, Inc. (hereinafter referred to as the "Corporation")."

SECOND: That in lieu of a meeting of the sole stockholder of the Corporation, such stockholder has given written consent to said amendment in accordance with Section 228(a) of the General Corporation Law, and said written consent was filed with the minutes of the Corporation.

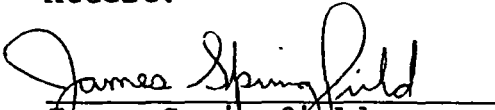
THIRD: That the aforesaid amendment was duly adopted in accordance with the applicable provisions of Sections 141, 228 and 242 of the General Corporation Law.

FOURTH: That the capital of the Corporation will not be reduced under or by reason of said amendment.

IN WITNESS WHEREOF, the Corporation has caused this certificate to be signed by its Vice President and Assistant Secretary this 16th day of January, 1989.

  
Jill M. Blundon,  
Vice President, General  
Counsel and Secretary

Attest:

  
James Springfield  
Assistant Secretary



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**FILED**

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**CERTIFICATE OF AMENDMENT**

**OF**

*[Signature]*  
SECRETARY OF STATE

**RESTATED CERTIFICATE OF INCORPORATION**

*10 Am*

BEAZER MATERIALS AND SERVICES, INC. (the "Corporation"),  
a corporation existing under and by virtue of the General  
Corporation Law of the State of Delaware (the "General  
Corporation Law"), does hereby certify:

FIRST: That the Board of Directors of the Corporation  
has adopted in accordance with Section 141(f) of the  
General Corporation Law the following resolution by  
written consent proposing and declaring advisable an  
amendment to the Restated Certificate of Incorporation  
of the Corporation, and said written consent was filed  
with the minutes of the Corporation:

"RESOLVED, that the Board of Directors of the  
Corporation hereby declares that the Restated  
Certificate of Incorporation of the Corporation  
(the "Certificate") be amended, effective April 16,  
1990, by changing Article FRIST thereof so that, as  
amended, said Article shall be and read as follows:

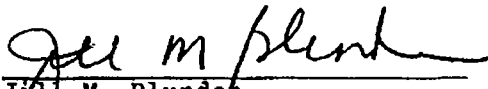
"FIRST: the name of the Corporation is Beazer East,  
Inc. (hereinafter referred to as the  
"Corporation")."

SECOND: That in lieu of a meeting of the sole  
stockholder of the Corporation entitled to vote, such  
stockholder has given written consent to said amendment  
in accordance with Section 228(a) of the General  
Corporation Law, and said written consent was filed with  
the minutes of the Corporation.


THIRD: That the aforesaid amendment was duly adopted in  
accordance with the applicable provision of Sections  
141, 228, and 242 of the General Corporation Law.

FOURTH: That the capital of the Corporation will not be reduced under or by reason of said amendment.

IN WITNESS WHEREOF, the Corporation has caused this certificate to be signed by its Vice President and Assistant Secretary this 23<sup>rd</sup> day of March, 1990.

  
J. M. Blundon  
Vice President, General  
Counsel and Secretary

Attest:

  
George Carroll  
Assistant Secretary

(Seal)

1ST CASE of Level 1 printed in FULL format.

HARRY HELFMAN et al., complainants, v. AMERICAN LIGHT AND  
TRACTION COMPANY et al., defendants.

COURT OF CHANCERY OF NEW JERSEY

121 N.J. Eq. 1; 187 A. 540

October 9, 1936, Decided

PRIOR HISTORY: On bill, &c.

HEADNOTES: 1. Questions of policy of management, of expediency of contracts or action, of adequacy of consideration not grossly disproportionate, of lawful appropriation of corporate funds to advance corporate interests, are left solely to the honest decision of the directors if their powers are without limitation and free from restraint.

2. Under ordinary circumstances, directors who contract with their corporation have the burden of sustaining the fairness of such contract when the same is attacked by the corporation, for such directors are trustees for the corporation and their dealings with their cestui que trust are regarded with suspicion, and may be declared void at the option of the corporation. The option, however, belongs to the corporation and is not exercisable by minority stockholders unless the contract is ultra vires, fraudulent or oppressive.

3. Where, as in the instant case, the by-laws of a corporation authorize the directors to make valid and binding contracts with other corporations having common directors with such corporation and with corporations in which its directors may be interested or of which they may be officers, the power of stockholders to specifically authorize such contracts or to ratify them after they have been made, unless such contracts are ultra vires, fraudulent or oppressive, is not open to question.

4. Such by-law provisions do not operate to such an extent, however, as to foreclose the court from scrutinizing such contracts as to their fairness.

5. Whatever may be fairly regarded as incidental to, and consequential upon, those things which are authorized by the charter of the corporation, ought not (unless expressly prohibited) to be held by judicial construction to be ultra vires.

6. In the instant case the transaction complained of when scrutinized and considered by the court as one entire transaction, or divided into its component parts was not only intra vires and free of fraud or oppression, but fair to the corporation.

COUNSEL: Mr. Thomas G. Haight and Mr. Waldron M. Ward, for the complainants.

Mr. Robert H. McCarter, for the defendant American Light and Traction Company.

Mr. Merritt Lane and Mr. Park Chamberlain (of the Iowa bar), for the defendants The United Light and Power Company and The United Light and Railways Company.

Mr. Josiah Stryker and Mr. Thomas J. Mitchie (of the Pennsylvania bar), for

the Koppers Company of Delaware and Koppers Gas and Coke Company.

Mr. John Milton, for the individual defendants.

JUDGES: Stein, V. C.

OPINIONBY: STEIN

OPINION: STEIN, V. C.

The complainants, Harry Helfman, of Detroit, Michigan, and Stockton Cranmer, of Somerville, this state, bring this suit as stockholders of American Light and Traction Company, a New Jersey corporation (hereinafter termed "American" for brevity), for the benefit of said company against certain individuals who are or formerly were directors of American Light and Traction Company, and against The United Light and Power Company (hereinafter termed "United"), The Koppers Company of Delaware (termed "Koppers"), The United Light and Railways Company and other corporations named in the bill of complaint.

The total outstanding stock issued by the American Light and Traction Company at the time this bill was filed totaled two million seven hundred and sixty-eight thousand six hundred and thirty-two shares of common and five hundred and sixty-nine thousand four hundred and forty-eight shares of preferred, of which common stock complainant Helfman held five thousand seven hundred shares or approximately seventeen one-hundredths of one per cent. of the total, while complainant Cranmer was the owner of only ten shares of the common stock.

The bill of complaint sets forth three causes of action.

The first cause of action is predicated upon a series of transactions which occurred in July, 1928, and will herein be generally referred to as the "1928 Transaction." It consisted of the following:

1. Koppers transferred all of the outstanding stock of the Milwaukee Coke and Gas Company to American, receiving in exchange therefor thirty-eight thousand two hundred and seventy-two shares of the common stock of American.

2. American transferred one hundred and fifty-seven thousand nine hundred and forty shares of capital stock of the Brooklyn Union Gas Company (treating the small number of convertible debentures involved as though converted into stock) to corporations owned by stockholders of Koppers in exchange for debentures of such corporations of the aggregate face amount of \$ 21,321,900, which debentures bore interest at five and one-half per cent. per annum, were callable by the holders thereof upon a year's notice and were guaranteed by Koppers.

3. United transferred thirty-nine thousand five hundred and eighty-two shares of the capital stock of the Brooklyn Borough Gas Company (the total outstanding stock being forty thousand shares) to American, receiving in exchange therefor fifty-six thousand two hundred and forty-eight shares of common stock of American.

4. American transferred the above mentioned shares of stock of Brooklyn Borough Gas Company to corporations owned by the stockholders of Koppers in

exchange for debentures of such corporations of the aggregate face value of \$ 11,249,600, bearing interest at five and one-half per cent., callable on one year's notice by the holders thereof and guaranteed by Koppers.

5. Koppers transferred to United nineteen thousand three hundred and ninety-nine shares of preferred and one hundred and thirty-nine thousand seven hundred and sixteen shares of common stock of American and received in exchange therefor debentures of the aggregate face amount of \$ 26,872,970 and one hundred and fifty thousand shares of Class "A" stock of United, together with an eighteen-months option to purchase one hundred and eighty thousand additional shares of such stock at \$ 20 per share. The American stock transferred by Koppers to United consisted of Koppers' entire holdings of such stock, including the thirty-eight thousand two hundred and seventy-two shares of stock received as the consideration for the transfer of stock of The Milwaukee Coke and Gas Company.

6. United transferred seventy-five thousand shares of Detroit Edison stock to American, receiving in exchange therefor seventy-five thousand shares of American common stock.

It is charged by complainants that the entire transaction was conceived in fraud and consummated pursuant to a conspiracy between United and Koppers, which companies, the bill of complaint alleges, were in control of American and that the transaction resulted in loss to American.

These allegations and charges are denied by the defendants who say that the directors of American had good, sound business reasons for each part of the transaction above mentioned in which American participated; that American received full value for the securities transferred by it; that it not only suffered no loss but benefited by reason of such transaction.

The second cause of action alleges that the directors of the American were guilty of gross incompetence and neglect of duty in permitting, authorizing and approving purchase of stock of International Paper and Power and in holding said shares of stock, and that the purchase thereof was ultra vires.

The third cause of action concerns the transaction resulting in the purchase of the Detroit Edison stock in 1930. Here complainants seek to hold one Cyrus S. Eaton accountable for what they say was his profit or for the excess of the selling price over the fair value of the stock, charging that the purchase of said stock was made at an excessive figure to enable Otis & Company and Eaton to dispose of the same and thus assist them in their financial difficulties. Complainants also seek to hold the directors liable, charging them with gross negligence.

Complainants pray that the defendant beneficiaries of any of the transactions complained of be required to account for all gains and profits, or for the difference between the fair value of the properties purchased and sold respectively, by the American Light and Traction Company and the prices at which said properties were purchased or sold respectively; that the decree adjudge "the liability of all the defendants, corporate and individual [other than American Light and Traction Company], and each and every one of them for the losses and damages," and that all of them be required to account and pay over to American, such losses and damages which the American has sustained, "because of the fraudulent, wrongful and unlawful acts and omissions, including neglect of

duty and bad faith, of said defendants in committing, consummating, participating in, authorizing, consenting to, permitting, approving, ratifying and/or failing or neglecting to oppose or vote against the transactions mentioned in the first, second and third causes of action of this bill of complaint."

The 1928 transaction and the result thereof to American was as follows:

AMERICAN LIGHT & TRACTION CO.

RECEIVED:

Debentures for 157,940 shares of Brooklyn Union at \$ 135. per share	\$ 21,321,900
Debentures for 39,582 shares of Brooklyn Boro at \$ 284 plus per share	11,249,600
TOTAL DEBENTURES	* \$ 32,571,500
75,000 shares of Detroit Edison at \$ 200. per share	15,000,000
35,000 shares of Milwaukee Coke & Gas at \$ 218.70 minus per share	7,654,400
TOTAL RECEIVED	\$ 55,225,900

GAVE:

38,272 shares of its Common stock at \$ 200. per share for the 35,000 shares of Milwaukee Coke & Gas Co. stock	\$ 7,654,400
56,248 shares of its Common stock at \$ 200. per share for the 39,582 shares of Brooklyn Boro stock	11,249,600
75,000 shares of its Common stock at \$ 200. per share for the 75,000 shares of Detroit Edison stock	15,000,000
169,520 Shares of its Common stock at \$ 200. per share	\$ 33,904,000
Gave 157,940 shares of Brooklyn Union for \$ 135. per share or at a selling price of	21,321,900
	\$ 55,225,900

\* Net increase in cash or its equivalent to American as a result of these transactions \$ 32,571,500.

UNITED LIGHT AND POWER CO.

RECEIVED:

19,399 shares of American Light & Traction Co. Pfd. and 139,716 shares of American Light & Traction Co. Common. (Includes 38,272 shares of American Light & Traction Common at \$ 200. per share received by Koppers from American for the 35,000 shares of Milwaukee Coke & Gas stock at \$ 218.70 minus per share. The 19,399 shares of Preferred and 101,444 of the Common were acquired by Koppers before the

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1928 transactions.)	\$ 30,122,970
75,000 shares of American Light & Traction Co. Common for	
75,000 shares of Detroit Edison at \$ 200. per share	15,000,000
56,248 shares of American Light & Traction Co. at \$ 200. for	
39,582 shares of Brooklyn Boro stock at \$ 284. plus per share	11,249,600
TOTAL RECEIVED	\$ 56,372,570

## GAVE:

Debentures	* \$ 26,872,970
150,000 shares of its A Stock at \$ 21-2/3 per share	3,250,000
39,582 shares of Brooklyn Boro at \$ 284. plus per share	11,249,600
75,000 shares of Detroit Edison stock at \$ 200. per share	15,000,000
	\$ 56,372,570

\* Net increase of United Light & Power debt as a result of 1928 transactions \$ 26,872,970.

United gave Koppers an option to purchase 180,000 shares of United "A" Common at \$ 20.00 per share. This option was subsequently exercised.

## KOPPERS

## RECEIVED:

157,940 shares of Brooklyn Union at \$ 135. per share	\$ 21,321,900
39,582 shares of Brooklyn Boro at \$ 284. plus per share	11,249,600
38,272 shares of American Light & Traction Common at \$ 200. per share for 35,000 shares of Milwaukee Coke & Gas Co. at \$ 218.70 minus per share	7,654,400
150,000 shares of United Light & Power A at \$ 21-2/3 per share	3,250,000
Debentures issued by United. (Includes \$ 200. per share for 38,272 shares of American received by Koppers for Milwaukee Coke & Gas Co. and transferred to United by Koppers)	* 26,872,970
TOTAL RECEIVED	\$ 70,348,870

## GAVE:

Debentures for 157,940 shares of Brooklyn Union Gas at \$ 135. per share	\$ 21,321,900
Debentures for 39,582 shares of Brooklyn Boro Gas at \$ 284. plus per share	11,249,600
TOTAL DEBENTURES GIVEN	* \$ 32,571,500
Milwaukee Coke & Gas Co. (35,000 shares at \$ 218.70 minus per share).	7,654,400
19,399 shares of Preferred and 139,716 shares of Common of American Light & Traction Co. (Includes 38,272 shares of American Light & Traction Co. Common Stock at \$ 200. per share	

121 N.J. Eq. 1; 187 A. 540

received by Koppers from American for 35,000  
shares of Milwaukee Coke and Gas Company stock  
at \$ 218.70 minus per share).

30,122,970  
\$ 70,348,870

\*

Net increase of Koppers Co. debt as result  
of transactions \$ 5,698,530 - (\$ 32,571,500  
(26,872,970  
(\$ 5,698,530

American Light and Traction Company was organized in 1901 and was operated as a holding company. Its largest investments were made in stocks of public utility companies which it operated and managed. Its charter vested the company with broad general powers to own and operate waterworks, gas, electric and steam plants, and in addition to carry on any lawful business which to the corporation seemed capable of being conveniently carried on in connection therewith, or calculated, directly or indirectly, to enhance the value of its property. It possessed power to purchase, own, hold and vote corporate shares and to exercise generally the powers of ownership thereof.

\* The United Light and Power Company, a Maryland corporation, also a holding company, was engaged in the operation of utilities, and owned all of the common shares of The United Light and Railways Company, a Delaware corporation, which in turn owned all of the stock of the United American Company, also a Delaware corporation. The latter corporations owned large amounts of stock of American Light and Traction Company.

The Koppers Company, a Delaware corporation, purchased stock in the American Light and Traction Company, and both United and Koppers endeavored to increase their holdings in the open market. Finding themselves in competition resulting in an increased market price, these companies entered into an agreement to purchase in future for their joint account and to divide the stock as purchased equally between them, with the result that their joint holdings by 1928 amounted to thirty-eight and fifty-nine hundredths per cent. of the voting stock.

The Koppers Company, of which Mr. H. B. Rust, one of the individual defendants, was the president, for a number of years had been engaged in the ownership and operation of by-product coke plants, gas utilities and coal mines. The chief business of Koppers was the construction, ownership and operation of by-product coke plants. Such had been its business from its organization, and for some years prior to 1924, when it made its investment in American stock. Its plants were located at strategic points along the north Atlantic seaboard and a plan for expanding its coke business in that area had been formulated.

Koppers and United originally invested in the stock of American because business reverses had affected its price in the market.

Mr. H. B. Rust, president of The Koppers Company, and Mr. Frank T. Hulswit, president of The United Light and Power Company, were elected to the board of directors of American in 1924 and additional members of the operating staffs of the two companies were added to the board of directors thereafter. But it does not appear that the persons elected from these companies constituted a majority of the board.



The board of directors of American at the time of the 1928 transaction consisted of:

William Chamberlain, member of the executive committee of American, stockholder in American. Director, president, member of the executive committee and a stockholder in United. Holder of a moderate amount of stock in Continental Shares.

B. J. Denman, stockholder in American. Director, vice-president and general manager and member of executive committee of United. Holder of stock in Continental Shares; also a director of International Shares.

Cyrus S. Eaton, member of executive committee of American. Stockholder in American. Director, chairman of the board, member of executive committee of United. Partner in Otis & Company. Chairman of the board, Continental Shares. Director of International Shares. Stockholder, including holdings of Founders Shares, in those investment trusts.

Richard Schaddelee. Stockholder in American, director and chairman of the executive committee of United. Holder of Founders Shares, International Shares, and of shares of Continental Shares, Incorporated. Director of International Shares.

Edgar M. Williams. Director and stockholder of United. Mr. Williams died after the hearing in this cause. His executor, United States Trust Company, was substituted as defendant by consent order dated July 18th, 1933. Williams had been a director in American in 1924, before he became a director in United.

John S. Brookes, Jr., a member of the executive committee of American and a stockholder. A director and member of the executive committee of United and a stockholder. President and a director of the Koppers Gas and Coke Company, subsidiary of Koppers Company. Secretary and general counsel of The Koppers Company. The holder of Founders Shares of Continental Shares. Also secretary of Milwaukee Coke and Gas Company.

Donald MacArthur, vice-president of a subsidiary of The Koppers Company. He died not long after the 1928 transaction.

Charles D. Marshall, a stockholder in American. Director and chairman of the board and a member of the executive committee of The Koppers Company, and a stockholder.

Henry B. Rust. Chairman of the executive committee of the American and a stockholder. Director and member of the executive committee and a stockholder of United. Director, member of the executive committee and president of The Koppers Company, a stockholder. Also director and president of Milwaukee Coke and Gas Company. Also director and president of Elkhorn Piney Coal Mining Company. Stockholder in Continental Shares.

W. F. Rust. Stockholder in American. Holdings in stock of United. Director, member of executive committee and vice-president of The Koppers Company, and a stockholder. Also director and vice-president of Milwaukee Coke and Gas Company. Director and vice-president of Elkhorn Piney Coal Mining Company. Holder of Continental Shares stock.

W. C. Beckjord. Vice-president and stockholder of American. Holder of United stock.

R. B. Brown. President, member of executive committee of American, and stockholder. He became a director of United in December, 1928.

W. F. Douthirt. General counsel and vice-president of American and stockholder. Holder of stock in United.

A. P. Lathrop. Chairman of the board and member of executive committee of American. Holder of its stock. Holder United stock.

James Lawrence. Vice-president and secretary of American. Holder of stock.

Franklin Q. Brown. Holder of American stock. A banker, member of firm of Redmond & Company.

G. A. Elliott. Stockholder in American and United. Stockholder in Continental Shares.

Marshall Field. Member executive committee of American and stockholder in American and United. Banker, member of Marshall Field, Glore, Ward Company.

W. W. Foster. Member executive committee of American, and stockholder of American and Continental Shares.

Arthur Lehman. Resigned from the board January 6th, 1931.

Martin S. Paine. Stockholder in American, United and Continental Shares.

Complainants' cause of action relating to the 1928 transaction is predicated upon the theory that a breach of trust was committed by the board of directors of American. The board consisted of twenty-one members and the nineteen members present at that meeting were unanimous in the action taken.

It is alleged that Koppers and United, then possessed of approximately thirty-eight and fifty-nine hundredths per cent. of the stock of American, and with about the same percentage of directorship, had actually dominated the board and controlled their actions and succeeded in partitioning among themselves certain assets of American, at a grossly inadequate consideration and therefore detrimental to the interests of American and its minority stockholders.

The evidence shows that of the twenty-one directors in office in 1928, twelve had been directors long before either Koppers or United bought stock in the company. Some had been for a long time employes of American. Koppers and United did not attempt to displace the personnel of the board which had been active in the management of the corporation. It is contended that these independent directors bowed in subserviency to the whip of Koppers and United. This contention is founded upon an inference drawn by counsel of the complainants, not borne out by the evidence that such directors as were paid employes of American were so dependent upon Koppers and United for the continuation of their employment that they became unfaithful and disloyal.

Cyrus S. Eaton, one of the defendants and a partner in Otis & Company and interested in certain investment trusts, it is said, dominated and controlled

the entire directorate. But again the evidence introduced fails to show any influence attempted or exerted by Mr. Eaton over these directors. The part which he played in arranging these transactions was almost nil. In fact, he was not present at the meeting of the board which marked the final consummation.

The record is barren of evidence of fraud or direct personal interest upon the part of any director. None of the contracting corporations paid any fee, bonus or commission for any phase of the transaction and no officer or director received any. The directors are shown by the evidence to be business men, active in commercial and financial circles, well to do in their own right, and at least beyond the necessity of disloyal and perfidious betrayals of their trusts.

The series of transactions involving sales or exchanges of stock in 1928 were made by authority of the board of directors upon the recommendation of Mr. R. B. Brown, the president. The first corporate action in connection with this transaction occurred at a meeting of the executive committee on July 3d, 1928, when the president submitted a plan for an exchange of securities between the American, the United and the Koppers and recommended the plan for the approval of the committee. The executive committee approved the plan and recommended it to the board of directors for adoption. On the afternoon following the morning meeting of the executive committee, the board of directors by resolution approved the plan.

The original certificate of incorporation of American was filed April 6th, 1901, and the original by-laws adopted May 31st, 1901, at the first meeting of the incorporators and subscribers to the capital stock. Among the provisions in the by-laws then adopted appear the following:

"Article II, Section 9:

"Contracts. Inasmuch as the Directors of this Company are men of large and diversified business interests, and are likely to be connected with other corporations with which from time to time this Company may have business dealings, no contract or other transaction between this Company and any other corporation shall be affected by the fact that Directors of this Company are interested in, or are directors or officers of, such other corporation.

"The Board of Directors in its discretion may submit any contract or act for approval or ratification at any annual meeting of the stockholders, or at any meeting of the stockholders called for the purpose of considering any such act or contract, and any contract or act that shall be approved or be ratified by the vote of the holders of a majority of the capital stock of the Company which is represented in person or by proxy at such meeting (provided that a lawful quorum of stockholders be there represented in person or by proxy) shall be as valid and binding upon the corporation and upon all the stockholders as though it had been approved or ratified by every stockholder of the corporation."

This by-law remained unchanged until April 6th, 1909, when it became section 8 of Article II, and the first paragraph was amended by insertion of the words "or may be," as follows:

"Contracts. Inasmuch as the Directors of this Company are or may be men of large and diversified business interests, and are likely to be connected with other corporations with which from time to time this Company may have business

dealings, no contract or other transaction between this Company and any other corporation shall be affected by the fact that Directors of this Company are interested in, or are Directors or officers of, such other corporation."

Such a by-law as was said in *United States Steel Corp. v. Hodge*, 64 N.J. Eq. 807, 811; 54 A. 1, cannot amplify the corporate powers to the extent of validating any act ultra vires the corporation, but it enables the stockholders, by majority vote, to ratify any contract which the stockholders or the corporation might lawfully make.

The by-law, as amended in 1909, was in effect at the time of the transaction complained of.

American gave notice by mail and publication of an annual meeting of stockholders to be held March 18th, 1929, which notice stated that it was called "for the purpose of electing directors, and for the transaction of such other business as may be brought before the meeting, including considering and voting upon the approval and ratification of all contracts, acts, proceedings, elections and appointments by the board of directors, executive committee or stockholders since the last annual meeting of the company."

There were present at that meeting of stockholders in person and by proxy the holders of six hundred and eighty-six thousand one hundred sixty-five shares out of a total of eight hundred and twenty-five thousand seven hundred and seventy-nine shares entitled to vote; four thousand and three shares were represented in person and the balance by proxy, the proxy committee holding and voting proxies for five hundred and ninety-three thousand and twelve shares. According to the by-laws one-third of all the shares of the capital stock of the company constituted a quorum. The annual report of the company for the year ending December 31st, 1928, was presented and ordered filed. The minutes of all meetings of the executive committee and of the board of directors since the last annual meeting, including the minutes of the executive committee and of the board of directors at which the 1928 transaction was concluded were read by the secretary and resulted in the passage of a resolution by the stockholders approving the minutes of the last annual meeting and "the minutes of all directors' meetings and the minutes of all executive committee meetings held subsequent to the annual meeting of stockholders of March 19th, 1928, be and they hereby are in all respects approved, confirmed and ratified as read; and resolved further that all acts, matters and proceedings entered into and performed by the officers, directors and executive committee since the last annual meeting of stockholders be and they hereby are in all respects ratified, confirmed and approved."

The vote which was taken by ballot upon the adoption of the resolution resulted in five hundred and ninety-six thousand and thirty shares for adoption and ninety thousand one hundred shares against, and the resolution was declared adopted.

Complainant Helfman who made his first purchase of stock in May, 1923, was not present at the meeting nor was his stock represented by proxy.

In view of American's charter empowering the company to operate essentially as a utility holding company, the by-law provisions are readily understandable. Such a corporation would likely seek for membership upon its board of directors, men of broad experience in the operation and management of utility companies,

who, in the nature of things would likely be interested financially and perhaps officially with other utility companies.

The decisions in this state are not entirely clear as to the rule which is to be applied where two corporations having common directors contract with each other or where a corporation contracts with another corporation in which one or more of its directors has an interest. However, the incorporators of American, at the time of its organization, determined for themselves the status which a contract made between it and such other corporation should have and embodied this determination in a by-law of the corporation.

The by-law authorizes the directors of American to make valid and binding contracts with corporations having common directors with American and also with corporations in which American's directors may be interested or of which they may be directors or officers.

The power of stockholders to specifically authorize such contracts or to ratify them after they have been made, unless such contracts are ultra vires, fraudulent or oppressive, is not open to question. *United States Steel Corp. v. Hodge* (Court of Errors and Appeals), *supra*; *Matchell v. United Box Board and Paper Co.*, 72 N.J. Eq. 580, 586; 66 A. 938; *Stephany v. Marsden*, 75 N.J. Eq. 90, 93; 71 A. 598; affirmed, 76 N.J. Eq. 611; 75 A. 899.

The 1928 transaction, therefore, was *prima facie* valid and could not be successfully attacked without proof that it was of such a character as that the stockholders could not authorize it in advance or ratify it, or that it was ultra vires, fraudulent or oppressive.

Further, complainants contend that Koppers and United jointly and acting in concert, controlled American and directly exercised control in carrying through the 1928 transaction, and counsel argue that when the owner of the majority of the capital stock of a corporation uses the power possessed by him by reason of such ownership to secure the assets of the corporation for himself in fraud of the rights of the minority stockholders he becomes a trustee for the corporation. But this rule has no application to the case at bar for the reason that in the instant case the action taken was not ultra vires, and the proof fails to establish fraud or oppression. Moreover, it does not appear that Koppers or United, acting alone, possessed even semblance of control of American, for together these companies held but thirty-eight and fifty-nine hundredths per cent., the holdings of Koppers never exceeding eighteen and forty-one hundredths per cent., and those of United twenty and eighteen hundredths per cent. If it were found to be the fact that Koppers and United did act together, such control by itself alone would not support complainants' claim that either Koppers or United became trustees of American or its stockholders. "The majority stockholder is not made a trustee for the minority stockholders in any sense by the mere fact that he holds a majority of the stock, or by the further fact that he uses the voting power of his stock to elect a board of directors for the corporation. The majority stockholder does not necessarily control the directors whom he appoints, and, in fact, he has no right to control them, and if they are controlled by him, they may be violating their duty, for which he also may be liable. The majority stockholder may use his voting power so as to constitute all the holders of the minority stock the entire board of directors. No liability of the majority stockholder to the minority stockholder for the misdeeds of their common trustees -- the directors -- can arise from the mere fact that the majority stockholder had the power to

appoint, or, in fact, did appoint, these trustees. Such liability, however, may arise if the majority stockholder has made the derelict trustees his agents and dictated their conduct, and thus caused a breach of fiduciary duty, of which the minority stockholders complain." *Robotham v. Prudential Insurance Co.*, 64 N.J. Eq. 673, 689; 53 A. 842. (*Italics mine.*) In the instant case there is no evidence that the action of any of the directors was the result of dictation on the part of majority stockholders.

Under ordinary circumstances, a director who deals with his corporation has the burden of sustaining the fairness of the transaction when it is attacked by the corporation, because the director is a trustee for the corporation and his dealings with his cestui que trust are regarded with suspicion. A contract, therefore, made between a corporation and a director of such corporation is voidable at the option of the corporation. Such option, however, belongs to the corporation and is not exercisable by a minority stockholder unless the contract is ultra vires, fraudulent or oppressive. See *Mitchell v. United Box Board and Paper Co.*, supra; *Endicott v. Marvel*, 81 N.J. Eq. 378, 382, 383; 87 A. 230; *Lillard v. Oil, Paint and Drug Co.*, 70 N.J. Eq. 197, 58 A. 188, 56 A. 254 (at p. 205); *United States Steel Corp. v. Hodge*, supra; *Colgate v. United States Leather Co.*, 73 N.J. Eq. 72; 67 A. 657; *Bingham v. Savings Investment and Trust Co.*, 101 N.J. Eq. 413; 138 A. 659; affirmed, 102 N.J. Eq. 302; 140 A. 321; *General Investment Co. v. American Hide and Leather Co.*, 97 N.J. Eq. 230; 127 A. 659; *Stephany v. Marsden*, supra.

The rule that a contract between a director and his corporation is voidable at the option of the corporation has not, however, been applied to contracts between corporations having one or more common directors. *Robotham v. Prudential Insurance Co.*, supra; *Pierce v. Old Dominion, &c., Smelting Co. et al.*, 67 N.J. Eq. 399; 58 A. 319; *Hyams v. Old Dominion Copper Mining and Smelting Co.*, 82 N.J. Eq. 507; 89 A. 37; affirmed, 83 N.J. Eq. 705; 92 A. 588; *Marcy v. Guanajuato Development Co. et al.*, 228 F. 150; *General Investment Co. v. American Hide and Leather Co.*, supra.

When controlling stockholders actually assume control in the direction of the affairs of a corporation and intermeddle with the assets of the corporation and deal therewith to their own advantage, or in their own interest, it may well be that such directors thereby become affected by and subject to the rules which relate to persons standing in a fiduciary capacity.

The by-law provisions herein set forth, it should be said, do not operate to such an extent, however, as to foreclose the court from scrutinizing the 1928 transaction as to its fairness. When so scrutinized and considered as one entire transaction, or divided into its component parts, the conclusion is reached that the same was not only lawful and free of fraud or oppression but that it was fair to American, it having received full value for all that it conveyed to Koppers or United. And it should be noted in passing that this suit is brought by complainants for the benefit of all stockholders who might see fit to come in. None has seen fit so to do, and the natural inference is that none has any complaint to make. *Keely v. Black*, 91 N.J. Eq. 520, 523; 111 A. 22.

The proofs clearly demonstrate that there was no combination between United and Koppers to appropriate any of the assets of American for their own purposes and there was no combination between the directors who were respectively associated with United and Koppers to accomplish that purpose. In the evidence Mr. Brown and Mr. Brooks narrate in minute detail the inception of the

transaction and the reasons for it. It is quite apparent from the record that United and its directors were concerned solely with the interests of American, and the interests of United as a stockholder of American were precisely the same as those of any other stockholder of American. It must be remembered that when the 1928 transaction was completed United had increased its investment in American stock. It is inconceivable therefore that United or the directors associated with it would have been parties to a scheme to strip American of its assets.

With respect to Mr. Brown it is improbable that he would have been a party to a fraud on American which would result in financial injury to the company of which he was to continue as president.

Similarly so with Koppers, for while it ceased to be a stockholder of American, yet nevertheless it increased its stock holdings in United, which in turn, as I have pointed out above, had increased its holdings in American. The statement of these facts alone disposes of the unproved charges of a conspiracy to wreck American.

All parties concerned in the 1928 transaction, it appears from the evidence, were actuated by a sincere desire to protect and benefit American without undue injury to either United or Koppers. And, while the ultimate result cannot be taken into consideration in judging the fairness of the transaction as of the date it took place, the final result may be considered in arriving at the wisdom or otherwise of the directors of American in connection with the 1928 transaction. The stark fact is that the transaction has operated to the great benefit and advantage of American.

There is no proof that as a result of the 1928 transaction American did not receive full value for that with which it parted. It is argued by complainants that notwithstanding this fact Koppers should account to American for what is said to be the profit made by Koppers on the transfer of the plant of Milwaukee Coke and Gas Company.

The theory on which this is predicated is somewhat nebulous. Stating the view as simply as possible it is that when Mr. Rust as president negotiated for the purchase of Milwaukee Coke and Gas Company by Koppers that Koppers, because it was a stockholder of American, took the plant charged with some sort of a trust for American. There are several answers which completely dispose of this contention. Koppers through Mr. Rust or any other agent designated for this purpose had the right to purchase Milwaukee Coke and Gas Company or any other property for its own legitimate corporate purposes and this purchase by Koppers, I find as a fact, was for its legitimate corporate business without regard to American. Furthermore, the record clearly shows as an indisputable fact that the Milwaukee plant had been offered to American and American had declined to purchase it. Those in charge of American's affairs entertained a firm belief that a gas company should not own its source of supply of gas.

In arriving at these conclusions on this phase of the case I have disregarded the fact that American in the Milwaukee Coke transaction acted through its wholly owned subsidiary Milwaukee Gas and Light.

When Koppers bought the Milwaukee Coke plant there was no thought on Koppers' part to sell it to American. As I indicated Koppers bought the plant for its own legitimate corporate purposes. While Milwaukee Gas and Light Company

received a large part of its gas from the Milwaukee Coke plant it could and actually did operate without owning the coke plant. The cases which indicate that a stockholder will not be permitted to go out and purchase in his own right that which is essential to the conduct of the business of his corporation are therefore inapplicable.

In concluding the so-called 1928 transaction it must be clearly borne in mind that there is not a scintilla of evidence that United had anything to do with the purchase of Koppers of the Milwaukee Coke plant.

In the second cause of action the complainants charge the directors of American with negligence in purchasing and thereafter holding shares of International. The purchase is also said to be ultra vires because the International was not wholly operated as a utility company but was partly engaged in the paper industry.

The second amended certificate of incorporation filed by American on May 13th, 1901, grants to the defendant powers sufficiently broad, it is held, to purchase the stock of the International even though that company engaged partly in the paper industry. Moreover, the evidence shows that the property and the business of the International was preponderantly that of a public utility. The American was organized for the purposes of carrying on any lawful business capable of being conveniently carried on in connection with the operation and ownership of utilities. The seventh article grants to the board of directors power to purchase any property of any nature in their judgment useful or convenient in the business of the corporation, and further specifically provides that the corporation shall have power to purchase the capital stock of any other corporation or corporations and to exercise while owner of the same all of the rights which a natural person might exercise as their owner. The doctrine of ultra vires is to be reasonably and not unreasonably, understood and applied, and whatever may be fairly regarded as incidental to, and consequential upon, those things which are authorized by the charter of the company, ought not (unless expressly prohibited) to be held by judicial construction to be ultra vires. *Ellerman v. Chicago Junction Railways, &c., Co.*, 49 N.J. Eq. 217, 242; 23 A. 287.

The negligence asserted on the part of the directors without here reviewing the evidence upon which the assertion is predicated, seems to be, that the directors imprudently purchased the stock and imprudently failed to sell it before the depression in the market in 1929. In the argument the subject is treated as if the directors were acting as fiduciaries of a trust estate. Not so. Here, the capital of the corporation was to be employed in business pursuits and the apparent purpose of the corporation was to invest its capital in stocks and properties with a view to accretion in value and a reasonable return on the investment. If the judgment of the board of directors was honestly and prudently exercised in purchasing and holding the stock the court may not substitute its judgment for that of the board of directors.

The evidence does not disclose that in the purchase of International the directors failed to exercise such care and caution as would ordinarily be exercised by a person acting for himself. Judged as of the date the purchase was made the evidence is that they acted with extraordinary care, and were, therefore, justified in believing that the investment was a good one and in the best interests of the company.



It is gathered from the evidence that the board of directors at the time they purchased stock knew of its disabilities, the company at that time being engaged in a development which gave promise of future return. The stock was not purchased as a speculation but as a permanent investment after an analysis of the plan and the properties of the company. The stock increased in market value and remained stable until the depression. The drop in market value of stocks did not affect International only, it affected all stocks. If the board of directors should even be held to the accountability of trustees, it is settled law that in the absence of proof of bad faith or the failure to exercise reasonable discretion, they could not be held liable in not selling. The defendants-directors acted no differently than did many thousands of other ordinarily prudent and cautious persons who were trustees of estates and actually fiduciaries but whose action was subsequently approved by our courts. A trustee who, within the scope of his powers, acts in good faith, and prudently discharges the obligation of his trust is not responsible for errors of judgment. *Harris v. Guarantee Trust Co.*, 115 N.J. Eq. 602; 172 A. 209; *In re Cross* 117 N.J. Eq. 429; 176 A. 101.

If the action of the directors in the purchase and failure thereafter to sell the stock of the International were even to be judged by the rules just cited, there is nothing in the evidence upon which the charge of negligence could be rested. In a purely business corporation such as that of American the authority of the directors in the conduct of the business of the corporation must be regarded as absolute when they act within the law, and the court is without authority to substitute its judgment for that of the directors. Whether the business of such a corporation should be operated at a loss during a business depression or close down at a smaller loss, is in the absence of a showing of bad faith or abuse of power a purely business and economic problem to be determined by the directors of the corporation and not by the court. *Ellerman v. Chicago Junction Railways, &c., Co.*, supra; *Farmers Loan and Trust Co. v. Hewitt*, 94 N.J. Eq. 65; 118 A. 267; *Kelly v. Kelly-Springfield Tire Co.*, 106 N.J. Eq. 545; 152 A. 166.

It is deemed important and therefore here noted that on October 25th, 1929, complainant Helfman discussed the 1928 transaction and the purchase of International Paper with Mr. Brown; that Helfman sent for and received a report on International Paper and on October 28th, 1929, bought two hundred shares of American stock at \$ 275 per share (the par of which was \$ 100), and on October 25th, 1929, he bought one hundred shares at \$ 275 per share. These shares of stock were purchased after Helfman talked with Mr. Brown. So that Mr. Helfman evidently thought so well of the transaction that he speculated in American on his own account. The stocks rose in value but complainant Helfman did not sell.

The third cause of action is founded upon the purchase in August, 1930, of one hundred and twenty-six thousand shares of Detroit Edison, at \$ 222.50 per share. American began the purchase of Detroit Edison stock in May, 1926, and prior to 1928 had already acquired six thousand four hundred and fifty-six shares at a cost of \$ 849,231.75. The additional purchases before and after the purchase of the seventy-five thousand shares of Detroit Edison involved in the 1928 transaction brought the total at the time of the purchase in 1930 up to one hundred thirty thousand eight hundred and forty-one shares. The purchase in 1930 complained of was made from Otis & Company.

Respecting this transaction the evidence shows that at a meeting of the executive committee of the board of directors of American held on August 15th,

1930, the chairman reported that the company's subsidiaries, Dexter Company and Eastern Company, owned about one hundred and thirty thousand shares of Detroit Edison stock and that Otis & Company held one hundred and twenty-six thousand shares, which they desired to sell. The chairman stated he believed that the purchase of this one hundred and twenty-six thousand shares would substantially strengthen the company's position and increase the value of the block of stock presently owned. It would make the company (and its subsidiaries) the largest single stockholder in the Detroit Edison Company. The North American Company and its associates, he reported, owned a large block of Detroit Edison stock, and their holdings being probably somewhat larger than that of American and its subsidiaries would own if the purchase be made, and the combined holdings of the North American Company and American (and its subsidiaries) would approximate forty-five per cent. of the total stock of the Detroit Edison Company.

The following resolution was then adopted:

"Resolved: That the officers of the Company be authorized and empowered to negotiate with Otis & Co. for the purchase of 126,000 shares of Detroit Edison stock at not to exceed \$ 222.50 per share, and if such negotiations are successful to contract with Otis & Co. for the purchase of said stock on such terms and conditions as the officers may deem advisable."

Subsequently, at a meeting of the board of directors on September 26th, 1930, the minutes of the executive committee meeting of August 15th were read and approved.

The stockholders met on March 23d, 1931, after notice to all the stockholders, including Helfman, and he attended this meeting. The minutes of the executive committee meeting of August 15th, 1930, and the directors' meeting of September 26th, 1930, were read, and the following resolutions adopted:

"Resolved that this meeting of the stockholders recommends that the minutes of the Executive Committee meeting of September 10, 1930, be amplified to include a report by the President showing that the 126,000 shares of Detroit Edison were purchased at \$ 222.50 per share, and received by this Company as authorized by the Committee at its meeting of August 15, 1930, and as shown by the Treasurer's report appended to the minutes of said meeting of September 10, 1930.

"Resolved that the minutes of all Directors' meetings and Executive Committee meetings held subsequent to the annual stockholders' meeting of March 17, 1930, and all the acts, matters and proceedings entered into by the officers, directors and Executive Committee, pursuant to such minutes (amplified as recommended at this meeting) be, and the same hereby are ratified, approved and confirmed."

There were three million three hundred and three thousand six hundred and twenty-three shares entitled to vote, of which two million seven hundred and eighty-four thousand two hundred and eighty shares were present in person or by proxy (more than a quorum under section 3 of the by-laws). The resolutions of approval were adopted by the vote of two million four hundred and twenty-four thousand four hundred and sixty-eight shares. Against three hundred and fifty-nine thousand eight hundred and twelve shares were voted including five thousand seven hundred shares held by Mr. Helfman. Between the annual meetings of 1929 and 1930 the American shares had been split, four for one, which

accounts for the increased shares at the 1930 meeting.

Cyrus S. Eaton was at the time and had been for many years a partner of Otis & Company, members of the New York Stock Exchange, and also a director and member of the executive committee of American. Prior to the meeting of August 15th, 1930, he tendered his resignation as to both positions, which was accepted at that meeting.

The Detroit Edison stock purchased was actually owned by Foreign Utilities, Limited, with the exception of a small amount held by Industrial Shares, Incorporated. Foreign Utilities, Limited, was a Canadian corporation holding no stock in American, and American held none in it. Eaton was not a director or officer of Foreign Utilities, Limited, and there is not involved the question of common directorate. Eaton and his wife owned approximately twenty-six per cent. of the stock in Foreign Utilities and some of Eaton's relatives held substantial stock interest in the company.

The attack by complainants with respect to this transaction is leveled at the price paid of \$ 222.50 per share, when the book value of Detroit Edison was about \$ 112, the earnings in 1929 per share \$ 11.15, in 1930, about \$ 8.75, the dividend rate eight per cent., and the return to American in 1930, less than four per cent. It is argued that the purchase was made to help Eaton, who complainants' counsel say dominated and influenced the board of directors who "gulped down \* \* \* the principal stockholder's offer without ascertaining the true ownership of the stock or the profits accruing to him" and "paid an excessive, unwarranted price for the stock," which would not have been paid had their judgment been free and independent. Worthy of much attention and bearing upon this argument is the admission of complainants' counsel in their brief that "the determination of the price which they would have been justified in paying is, of course, difficult. Under all the circumstances, and on the evidence, we submit that \$ 160 per share would have been a fair price, and \$ 175 a share, the maximum within limits of reason and good judgment."

The evidence and exhibits in this case embrace twenty-five volumes. Until now no attempt to discuss the evidence in detail bearing upon any point has been made, and reasonable brevity demands that that course be continued. It is sufficient to say that the evidence does not sustain the charge made by the complainants that the directors were negligent in consummating this transaction, and this aside from the ratification by the stockholders.

The bill of complaint, paragraph 4 of the third cause of action, alleges that (1) there was no sound business or economic reason for the purchase of the Detroit Edison stock; (2) the purchase was made to enable Otis & Company and C. S. Eaton to dispose of the stock at a price greatly in excess of its true value and thus to assist them in the financial difficulties in which, it is alleged, they were then involved, and which subsequently resulted in their retirement from business; (3) the price paid was fraudulently excessive, the stock not being worth in excess of \$ 175 per share; (4) the stock was purchased on a declining market and the earnings had been declining for some time previous.

Considering these allegations and the evidence produced the conclusion is arrived at that as to the first, American had funds to invest and was carrying them in the debentures only until it could find a suitable investment. The evidence does not show that the purchase was not made in pursuance of a sound business policy.

As to the second, there is no evidence that either Otis & Company or Cyrus S. Eaton were at the time in any financial difficulty. Each defendant was asked in interrogatories concerning his knowledge of the financial condition of Otis & Company and Mr. Eaton in August, 1930, and none knew of any financial difficulty.

And now as to the third claim of complainants that the stock was not worth in excess of \$ 175 per share, that is purely the complainants' judgment and there is no evidence that the price paid was fraudulently excessive. It had gone to \$ 385 in August, 1929. Even after the market break it rebounded to \$ 255.75 in April, 1930. The evidence, when considered together with the reasons advanced for the purchase, indicates honest business judgment. The stock, to say the least, was of greater value to American under the circumstances than to any one else.

With respect to the fourth allegation, it is common knowledge that in August, 1930, there existed no obvious condition in either stock market or business world, which would indicate further serious recession in market values or in business activity. These ordinarily prudent business men did not believe that there was to be a break in the continuity of profitable utility investment and operation or conclude that they should allow the large block of Detroit Edison shares offered them, get away possibly for all time. It is now a matter of common knowledge that more fortunes were lost on account of their owners having entered the market after the breaks than before. Conservative business men entered feeling that the bottom had been reached. Our court of errors and appeals chartered our course in connection with this phase of the case. In reversing the late Vice-Chancellor Backes, they said in *In re Cross*, supra: "His," executors, "judgment erred. So did many another's without any taint of gambling or speculation. There was no proof that the stocks were trash, or that the prospect for their recovery was not on a par with the expectations for the general securities market, or that there was any popular belief that security prices in 1931 would continue their recession.

"The treacherous path that lay before the investor, whether trustee or otherwise, in the spring and summer of 1931 (when it is suggested that the executors should have sold and reinvested), is apparent when, with the advantage of retrospection, we look upon the debacle that ensued. Favored forms of trust investment were sucked into the maelstrom -- mortgage investments, corporate bonds, and even cash in bank. \* \* \* However loudly it may now be said that people should have foreseen, most men of that degree of prudence and caution that we call ordinary did not foresee. Wisdom after the event is not the test of responsibility." The decree surcharging the executors in the cited case for failure to sell securities which at the peak preceding the 1929 crash possessed the value of \$ 71,000, and which had declined to \$ 9,000 at the time the suit was brought, was reversed.

The foregoing disposes of the further claim on the part of the complainants predicated upon the depreciation in security value of the Detroit Edison stock, for certain it is that if the events which transpired between 1929 and the filing of this bill of complaint militate to save harmless a trustee for negligence alleged against him for failure to dispose of securities and consequent depreciation in value, these defendants-directors of a business corporation may not be held liable for negligence or mistake of judgment in that regard if that judgment was honestly exercised and fairly within the scope of the power confided to them.

The bill of complaint will be dismissed. Present decree.

CLIFFS MINING COMPANY #5984  
(i.e. Cleveland Cliffs - Litigation)  
RE: Research re The Milw Electric Railway & Light Co.

## MILWAUKEE AREA INTERURBAN RAILWAYS

Interurban lines affiliated with The Milwaukee Electric Railway and Light Company. In 1896 the Milwaukee Light, Heat and Traction Company was formed as subsidiary of The Milwaukee Electric Railway and Light Company, to establish electric railways and utilities outside the city of Milwaukee. This subsidiary ceased to exist as a separate entity in 1919.

All interurban lines originally used streetcar trackage within Milwaukee, until the 1930 completion of the high speed line between downtown Milwaukee and the west suburbs. There was even a proposal to construct a subway in the heart of downtown Milwaukee for the interurban trains, but the Great Depression prevented that. The last company to operate interurban trains was known as "Speedrail", and they ceased operations in 1951 after a series of accidents and other problems. Much of the abandoned high speed right of way was subsequently used for construction of a freeway.

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### MILWAUKEE-RACINE-KENOSHA (CONSTRUCTION)

1897 - Milwaukee-Racine-Kenosha Street Railway Company completes line between its namesake cities, using trackage of The Milwaukee Electric Railway and Light Company within Milwaukee, and the Belle City Street Railway Company within Racine.

1899 - Milwaukee-Racine-Kenosha Street Railway Company acquired by The Milwaukee Electric Railway and Light Company, and becomes part of the Milwaukee Light, Heat and Traction Company.

1928 - First high speed segment opened between Milwaukee and Kenosha, bypassing street operation in South Milwaukee.

1932 - High speed trackage completed into Kenosha.

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### MILWAUKEE-WAUKESHA-WATERTOWN (CONSTRUCTION)

1895 - Waukesha Beach Electric Railway opens between Waukesha and Waukesha Beach.

1897 - Waukesha Beach Electric Railway acquired by The Milwaukee Electric Railway and Light Company, and becomes part of the Milwaukee Light, Heat and Traction Company.

1898 - Line completed between Milwaukee and Waukesha.

1907 - Line completed from Waukesha to Oconomowoc.

1908 - Line completed from Oconomowoc to Watertown.

1924 - Wisconsin Motor Bus Lines subsidiary introduces connecting bus service from Watertown to Madison.

1926 - Rapid Transit segment opened between 35th Street in Milwaukee, and West Junction at 100th Street.

1930 - Rapid Transit line completed between 8th Street in downtown Milwaukee, and 35th Street.

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### MILWAUKEE-EAST TROY/BURLINGTON (CONSTRUCTION)

1903 - Line completed between Milwaukee and Hales Corners.

1907 - Line completed between Hales Corners and East Troy.

1909 - Line completed between St. Martin's Junction and Burlington.

1919 - Wisconsin Motor Bus Lines formed as subsidiary, operating extensions of interurban railway system. First bus route connects with railway at Burlington, operating to Lake Geneva.

1927 - Trains begin using new Rapid Transit line between 35th Street in Milwaukee, and Fruitland Junction at 100th Street.

1930 - Rapid Transit line completed between 8th Street in downtown Milwaukee, and 35th Street.

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#### **MILWAUKEE-PORT WASHINGTON-SHEBOYGAN (CONSTRUCTION)**

1907 - Milwaukee Northern Railway Company completes line between Milwaukee and Port Washington.

1908 - Milwaukee Northern Railway Company completes line between Port Washington and Sheboygan.

1928 - Milwaukee Northern Railway Company acquired by The Milwaukee Electric Railway and Light Company.

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#### **INTERURBAN DECLINE/BUS REPLACEMENT**

1938 - Rail service abandoned between St. Martin's Junction and Burlington, replaced with buses operated by Midland Coach Lines.

1939 - Rail service abandoned between Hales Corners and East Troy, replaced with buses operated by Midland Coach Lines. Segment between Mukwonago and East Troy acquired by village of East Troy to insure continued freight service from Soo Line Railroad connection at Mukwonago. Segment now operated by East Troy Electric Railroad Museum

1940 - Rail service abandoned between Oconomowoc and Watertown, replaced with buses.

1940 - Rail service abandoned between Port Washington and Sheboygan, replaced with buses.

1941 - Rail service abandoned between Waukesha and Oconomowoc, replaced with buses.

1943 - Racine-Kenosha segment sold to Kenosha Motor Coach Lines.

1944 - Milwaukee-Racine segment sold to Kenosha Motor Coach Lines.

1945 - Milwaukee-Port Washington line sold to Kenosha Motor Coach Lines.

1946 - Milwaukee-Waukesha line and Milwaukee-Hales Corners line sold to Kenosha Motor Coach Lines.

1946 - Kenosha Motor Coach Lines sold to Shore Line Transit Corporation of Hammond, Indiana.

1947 - Rail service abandoned between Milwaukee and Kenosha, replaced with buses. This bus service would be operated by Milwaukee & Lake Shore Line, Inc., a subsidiary of the Chicago North Shore & Milwaukee Railroad. In addition, Wisconsin Coach Lines had been operating between these cities since 1941.

1947 - Northland Greyhound Lines acquires bus route between Port Washington and Sheboygan.

1948 - Northland Greyhound Lines acquires Kenosha Motor Coach Lines from Shore Line Transit Corporation. Rail service abandoned between Milwaukee and Port Washington, replaced with buses.

1949 - Northland Greyhound Lines acquires Midland Coach Lines.

1949 - Milwaukee Rapid Transit and Speedrail Company acquires Milwaukee-Waukesha line and Milwaukee-Hales Corners line from Northland Greyhound Lines. These are the last remaining interurban rail lines.



1951 - Milwaukee Rapid Transit and Speedrail Company abandons all operations. Bus service between Milwaukee and Oconomowoc assumed by Waukesha Transit Lines.

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#### **LAKESIDE BELT LINE**

1932 - Line opened across Milwaukee's south and southwest sides, freight only and providing access to the Lakeside Power Plant.

1963 - Final segments of line abandoned or sold to Chicago and North Western Railroad.

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#### **CHICAGO NORTH SHORE AND MILWAUKEE RAILROAD**

The Chicago North Shore and Milwaukee Railroad entered Milwaukee from Chicago. Further information can be found at the [Chicago Interurbans Page](#).

# MILWAUKEE TRANSIT

By  
Bill  
Vandervoort



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## MCTS INFORMATION

Visit this official MCTS Web site for schedule and route information, or phone MCTS at 414-344-6711.

Since 1975, the Milwaukee County Transit System has operated the local buses in the Milwaukee area. Additional bus systems serve other parts of southeastern Wisconsin. Prior to 1975, various private companies, most notably The Milwaukee Electric Railway and Light Company, operated all buses and electric railways in Milwaukee and southeastern Wisconsin.

## MILWAUKEE TRANSIT HISTORY/MAPS

The Milwaukee Electric Railway and Light Company, was the most notable company to operate the area's public transportation system, operating from 1896 to 1938. The transit system subsequently changed names twice prior to the 1975 county takeover. And during much of its period of subsequent private ownership, buses were merely lettered for "The Transport Co."

## TRANSIT ROUTES - PAST AND PRESENT

Many of today's bus routes in Milwaukee have histories which can be traced back to streetcars, and even horse cars.

## BUS/STREETCAR/INTERURBAN CAR ROSTERS

Buses have operated in Milwaukee since 1920. The last streetcars ran in 1958, and trolleybuses ran from 1936 to 1965.

## BUS PHOTOS

Photos of Milwaukee buses, present and past.

## MILWAUKEE TRANSIT FACILITIES

Three old carhouses eventually evolved into today's modern MCTS operating stations, while additional carhouses were eventually closed.

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## INTERURBAN TRANSPORTATION

From 1895 to 1951, various interurban railways operated in Milwaukee and southeastern Wisconsin. Interurban bus service began operating in 1919 to supplement the interurban railways, and buses replaced the interurban railways beginning in 1938.

## WISCONSIN COACH LINES

Official Web site of Wisconsin Coach Lines, whose bus service evolved from the past electric interurban railways.

**INTERURBAN RAILWAY HISTORY**

**INTERURBAN RAILWAY MAP**

**INTERURBAN CAR ROSTER**

**INTERURBAN BUS HISTORY**

**INTERURBAN BUS MAP**

**WISCONSIN COACH LINES BUS PHOTOS**

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**KENOSHA**

Streetcars operated in Kenosha from 1903 until 1932, when they were replaced with trolleybuses. [During most of those years, the streetcars were operated by Wisconsin Gas & Electric Co., which was a subsidiary of The Milwaukee Electric Railway & Light Co.] The trolleybuses were discontinued in 1952.

**KENOSHA TRANSIT INFORMATION**

Official Web site of Kenosha Transit.

**KENOSHA STREETCAR CIRCULATOR**

A unique new light rail line opened in downtown Kenosha in 2000, operating between the Metra train station and the lakefront.

**KENOSHA TRANSIT HISTORY**

**STREETCAR AND TROLLEYBUS MAP**

**STREETCAR ROSTER**

**CARHOUSES/BUS GARAGES**

**BUS PHOTOS**

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**RACINE**

Streetcars operated in Racine from 1883 until 1940. During most of those years, the streetcars were operated by The Milwaukee Electric Railway & Light Co.

**RACINE TRANSIT INFORMATION**

Official Web site of the Belle Urban System (B.U.S.).

**RACINE TRANSIT HISTORY**

**STREETCAR MAP**

**STREETCAR ROSTER**

## CARHOUSES/BUS GARAGES

## BUS PHOTOS

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## **WAUKESHA**

Never had local streetcars, but different private predecessor bus companies, including Waukesha Transit Lines, Inc.

Waukesha Metro Transit - city agency operating present bus system in Waukesha.

## **WATERTOWN**

In 1926 and 1927, The Milwaukee Electric Railway and Light Company operated a local streetcar route in Watertown, which proved to be unprofitable.

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## MILWAUKEE TRANSPORT LINKS

Additional Web sites containing information on public transportation in Milwaukee and southeastern Wisconsin.

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## **GETTING THERE FROM CHICAGO**

The only local Chicago area transit system operating into Wisconsin is Metra, with the Union Pacific North Line terminating in Kenosha. Amtrak operates between Chicago and Milwaukee, with trains also stopping in Sturtevant. Local bus service is available between Sturtevant and Racine via the Belle Urban System. In addition, Wisconsin Coach Lines operates interurban bus service from Kenosha through Racine into Milwaukee.

## MILWAUKEE WITHOUT A CAR

This unofficial Web site provides additional information regarding public transportation in Milwaukee and southeastern Wisconsin.

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*Some historic information for this page is from "TM, The Milwaukee Electric Railway and Light Company", the Central Electric Railfans' association (CERA) Bulletin 112, by Joseph M. Canfield. Additional information is from various issues of the magazine "Motor Coach Age".*

Information contained on this site is unofficial. Any suggestions for additions and improvements to this site are welcome. Thanks for visiting! Bill Vandervoort

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Go to Chicago Transit & Railfan Web Site

## Notes

### CREAM CITY RAILWAY COMPANY Horse Cars 1874 - 1890

- A Car Barn - Out of use by 1892
- C Car Barn - Out of use by 1892
- D Stable - Out of use by 1892
- H Car Barn - Rebuilt for electric cars in 1890

### FOREST HOME DUMMY LINE 1876 -

- B Dummy Engine Barn

### MILWAUKEE STREET RAILWAY Electric - 1890 - 1896

- E Car House - Still standing
- G Car House - Built and burned out in 1892.
- H Car House - Rebuilt in 1893 to include H. Still Standing.
- H Car House - Rebuilt from horse car barn. See Note G.

### THE MILWAUKEE ELECTRIC RAILWAY & LIGHT CO. Electric - 1896 -

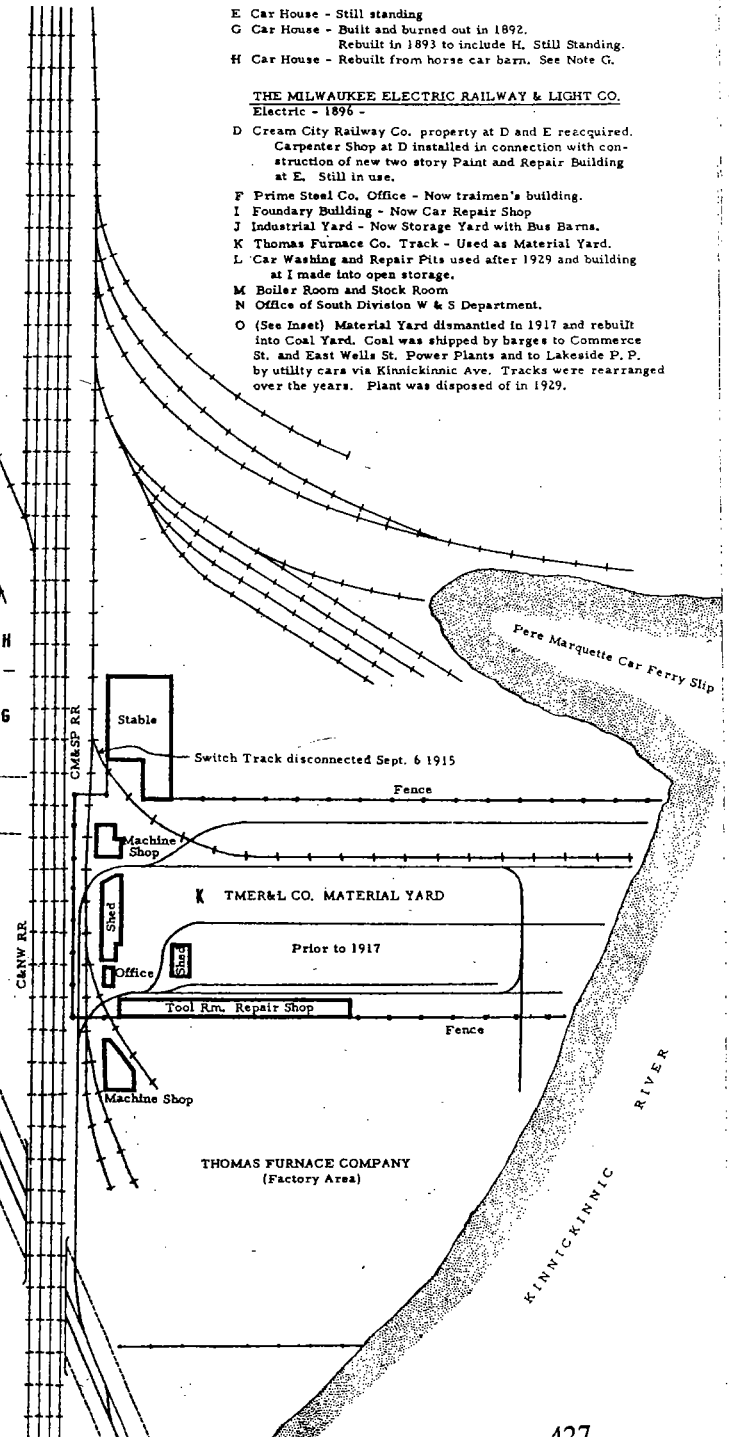
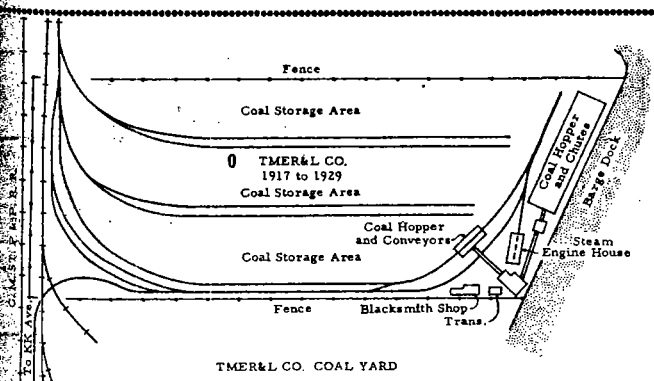
- D Cream City Railway Co. property at D and E reacquired. Carpenter Shop at D installed in connection with construction of new two story Paint and Repair Building at E. Still in use.
- F Prime Steel Co. Office - Now trainmen's building.
- I Foundry Building - Now Car Repair Shop
- J Industrial Yard - Now Storage Yard with Bus Barns.
- K Thomas Furnace Co. Track - Used as Material Yard.
- L Car Washing and Repair Pits used after 1929 and building at I made into open storage.
- M Boiler Room and Stock Room
- N Office of South Division W & S Department.
- O (See Inset) Material Yard dismantled in 1917 and rebuilt into Coal Yard. Coal was shipped by barges to Commerce St. and East Wells St. Power Plants and to Lakeside P. P. by utility cars via Kinnickinnic Ave. Tracks were rearranged over the years. Plant was disposed of in 1929.

Scale in feet

0 100

SMS

## KINNICKINNIC CAR STATION & YARDS ALL TIME LAYOUT

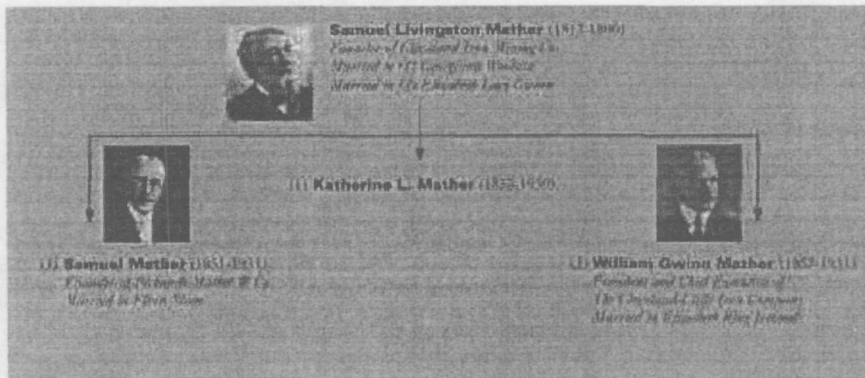


CLEVELAND CLIFFS

#5984

CLIFFS MINING/PICKANDS MATHER HISTORY

## The Mather Family and Cleveland-Cliffs



The name of Mather stands tall in the history of New England and its cultural colony, the Western Reserve of Ohio. From Cleveland, the metropolis, the family's influence spread to Cleveland-Cliffs, the iron mining and steel industries, and the industrialization and cultural development of the United States.

Tracing lineage back to John Mather of Lancashire, England, the Mathers came to America in the person of John's grandson, the Rev. Richard Mather (1596-1669), who arrived in Massachusetts in 1634.

One of his sons was Increase Mather, who was a president of Harvard University and the father of Cotton Mather; the Congregational churchman involved in the Salem witch trials.

Another of Richard's sons, Timothy Mather (1628-1684), was progenitor of the line leading to the Cleveland-Cliffs' Mathers. Timothy's son, Richard Mather (1653-1688), settled in Lyme, Connecticut, where three generations followed—Samuel Mather (1683/84-1725), his son, Richard Mather (1712-unknown), and his son, Samuel Mather (1745-1809).

It was the latter Samuel Mather who was a director of the Connecticut Land Company, which owned vast tracts of land in northern Ohio's Western Reserve. His son, another Samuel Mather (1771-1854), had visited Cleveland but returned to Connecticut where he married Catherine Livingston of the New York Livingstons.

It was left to their son, Samuel Livingston Mather, born in 1817, to become the first Mather to settle in Ohio. He arrived in 1843, at the age of 26, to look after his father's lands. Four years later, he was among founders of The Cleveland Iron Company.

The young industrialist had two sons, halfbrothers Samuel Mather (1851-1931) and William Gwinn Mather (1857-1951). Both would carry on his interests in iron mining but would take different paths.

Samuel left Cleveland Iron Mining in 1883 to join friends in establishing Pickands Mather & Co., an iron mining and shipping firm. He became a successful industrialist in his own right and soon assumed civic leadership as well, helping establish the Community Chest in Cleveland, which has become the United Way Services, and arranging a \$1.6 million trust to sustain it. When he died, Samuel Mather was said to be the richest man in Ohio.

The younger son, William Gwinn Mather, earned the reputation of being "Cleveland's first citizen," for his civic and philanthropic efforts. When his father died in 1890, William assumed the presidency of Cleveland Iron Mining and in 1891 completed a merger his father and Jeptha Wade had begun, forming The Cleveland-Cliffs Iron Company.

William was the first president of the Cleveland Stock Exchange, first chairman of the city's Chamber of Commerce, president of the Cleveland Museum of Art and a founder of Republic Steel, Cleveland. He also underwrote numerous Upper Peninsula endeavors.

At the time of William's death in April 1951, the Associated Press published a lengthy article

about him and his family. It pointed out Mather's keen interest in the welfare of families in towns near company mines and, in explaining his place in history; suggested William's charitable characteristics stemmed from his family.

"Richard Mather (first to come to America) wrote the famous and influential Cambridge Platform in 1649 and aided in translating to English the Hebrew Psalms, the earliest book printed in English America," the Associated Press said.

The six generations descending from Richard produced 29 ministers, the wire service reported. It noted that Increase Mather published 102 books, Cotton Mather published 444 books and William G. Mather's library "contains more than 300 known volumes written by members of the family."

William G. Mather's marriage to Elizabeth Ring Ireland enabled the family to carry on the heritage through his stepson, the late James Ireland, who was on the company's Board Directors, and James' son, James D. Ireland III, who is now on the Board.

Samuel Livingston Mather and his sons, Samuel and William, contributed more than a century to iron mining. In a business sense, the three were reunited when ClevelandCliffs acquired Pickands Mather in 1986.

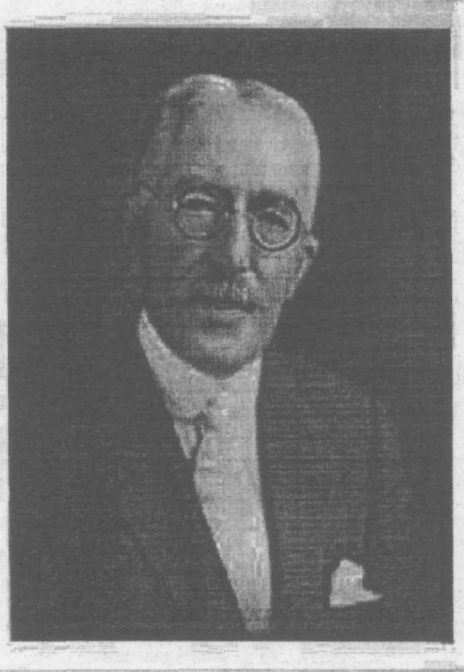






The 1980s produced dramatic change as the steel and iron ore industries experienced a severe depression. A number of iron mines in North America were permanently closed, while others experienced major cutbacks in production. Mines managed by ClevelandCliffs were among those affected.

In 1986, the Company announced plans to acquire iron mining competitor Pickands Mather & Co., which also had been founded in Cleveland. Among that Company's founders in 1883 was Samuel Mather, the oldest son of Cleveland Iron Mining Company executive Samuel Livingston Mather, and half brother to William G. Mather, longtime Cleveland-Cliffs president and chairman.



Samuel Mather

